# Illinois
# State Normal University
# Normal

# COURSE OF STUDY

AND

# OUTLINES OF WORK

OF

# ILLINOIS
# STATE NORMAL UNIVERSITY

NORMAL, ILLINOIS

1893

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PANTAGRAPH PRINTING AND STATIONERY COMPANY
PRINTERS
BLOOMINGTON, ILLINOIS

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# Illinois State Normal University.

## Early History.

THE Illinois State Normal University was established by act of the Legislature in 1857. The statute providing for its location directed the governing board to solicit bids from competing points. Four cities were especially interested in securing it. Bloomington, McLean county, having offered the most favorable inducements, was selected as the location of the school. In October, 1857, the school began its sessions in rented rooms in the city of Bloomington. In September, 1860, it was removed to what was then known as North Bloomington, where a commodious building had been erected for its accommodation. The suburb of North Bloomington subsequently became a separate town under the name of Normal. It has a population of about 4,000. It is a very desirable place of residence, having those qualities which are especially characteristic of school towns. The original charter provided that intoxicating liquors could never be sold within the limits of the town. There are no places of amusement, nor resorts that are in any respect objectionable. Electric cars connect Normal with Bloomington.

## Material Equipment.

THE Normal School is comfortably housed in two buildings. The older contains three stories and a basement. It is about 100 by 120 feet. It is built of brick and cost originally about $120,000. The basement contains dressing rooms for gentlemen, the chemical laboratory, a room used for clay work, another used for gymnastic exercises, and several store-rooms. On the first floor are the reading room and library, dressing rooms for ladies, office, a spacious room for drawing classes, and the assembly room and class rooms of the High School Department. On the second floor are the normal assembly room, with a seating capacity of 376, and eight class rooms each about 30x32. On the third floor are the museum, physical laboratory, office of the teacher of natural sciences, a large assembly hall, and the halls of the two literary societies.

The Training School building is a substantial brick structure of two stories and a basement. The basement contains play rooms and dry closets. On the first floor there are five school rooms, each having

a seating capacity of forty pupils. There is, beside, a smaller room that is used for recitation purposes. On the second floor there is a room for the grammar grade, with a seating capacity of 150. In addition to this there are eight recitation rooms, each of which is sufficiently large to accommodate a class of twenty-five. The peculiar construction of this part of the building is to be accounted for by the fact that it became necessary to secure as many class rooms as possible in order to furnish opportunities to a large number of pupil teachers to engage in the practice work.

The two buildings are heated from a commodious boiler house, which is equipped with three large boilers.

The chemical laboratory is well adapted to the needs of the school. The physical laboratory is well equipped with apparatus. The museum contains a large collection of specimens. The science department is furnished with an excellent lantern, and is also supplied with a steam pump for the compression of gases.

## THE ORGANIZATION OF THE SCHOOL.

THE institution known as the Normal School contains three departments: First, the Normal Department; second, the Training Department; third, the High School Department.

No person is admitted to the Normal Department who does not sign a declaration of his intentions to teach. Applicants must be 16 years of age if females, and 17 if males. No charge is made for tuition except to persons attending from other states, who do not expect to teach in Illinois. The membership of this department is usually about 500. At least eighty counties are ordinarily represented. Eleven teachers are employed in this department.

The Training School Department is a necessary adjunct of the Normal Department. It consists of a school of eight grades, five of which are below the grammar grade. The aggregate attendance of the Training School is usually about 300. Five persons are employed in connection with this school. Four of these devote their time to directing the practice work of the Normal pupils; the fifth is principal of the Grammar Department. No charge is made for pupils in the primary grades. The pupils in the intermediate department pay $15 a year, and those in the grammar grades $25.

The High School is conducted for the purpose of giving to pupils a business education, or an excellent preparation for college. It has, consequently, two courses of study, a General Course and a Classical Course,

each of which is four years. In this department, three teachers are employed. A tuition fee of $39 a year is charged. By the conditions of the law it must be self-supporting. The attendance is about 160. It has not only proved self-supporting, but has, for many years, returned a very considerable net income.

## Methods of Admission to the Normal School.

THE law establishing the school, provides that pupils may be appointed to free scholarships from the several counties of the state. Each county is entitled to two pupils, and each senatorial district to four more. Where a county comprises a senatorial district, consequently, it is entitled to appoint six pupils. Since there are two Normal Schools in the State, and all counties will not have representatives in each school, the Faculty are authorized to admit a number in excess of the number coming by appointment. These applicants are examined by the Faculty. The system of appointments is somewhat cumbersome, and the management of the institution quite prefers that those desiring to attend, should come to the school and pass the regular admission examination.

Graduates of reputable High Schools are admitted upon their diplomas. Persons holding first grade certificates are admitted without examination. Students of other State Normal Schools are admitted upon presentation of certificates of attendance in such schools, and will be excused from taking studies which they have successfully pursued. Such pupils should always bring with them a transcript of their records in the schools from which they come, and also a certificate of good moral character and honorable conduct. Credits are allowed only on work taken in State Normal Schools, or in the University of Illinois.

## The Course of Study.

THE regular course is three years in length. Pupils are permitted to take Latin, Greek, and German in the High School Department without any charge for tuition. If these subjects are added to the course four years are required for its completion. The following statement gives the subjects and the time devoted to each.

## First Year.

FIRST TERM.

Reading.....18 hours per month
Geography.....18 hours per month
English Grammar.18 hours per month
Arithmetic.....18 hours per month
Elements of Pedagogy.....
.....8 hours per month
Drawing.....8 hours per month
Orthography....10 minutes each day

SECOND TERM.

Reading.....18 hours per month
Arithmetic.....18 hours per month
Geography.....18 hours per month
Pedagogy .....18 hours per month
Drawing .....8 hours per month
Penmanship .....8 hours per month
Orthography....10 minutes each day

THIRD TERM.

History of the United States ...
.....18 hours per month
English Grammar.18 hours per month
Algebra.....18 hours per month
Pedagogy.....18 hours per month
Drawing.....8 hours per month
Vocal Music.....8 hours per month
Orthography... 10 minutes each day

## Second Year.

FIRST TERM.

Algebra.....18 hours per month
Elementary Psychology.....
.....18 hours per month
Civil Government.18 hours per month
Zoology.....18 hours per month
Drawing.....8 hours per month

SECOND TERM.

Rhetoric.....18 hours per month
Geometry.....18 hours per month
Ancient History..18 hours per month
Physiology.....18 hours per month
Practice Teaching in Model School
.....20 hours per month
Drawing.....8 hours per month

THIRD TERM.

Botany.....18 hours per month
Physical Geography. .....
.....18 hours per month
Criticism.... ....18 hours per month
Geometry.... ...18 hours per month
Practice Teaching in Model School
.....20 hours per month
Drawing..... 8 hours per month

## Third Year.

FIRST TERM.

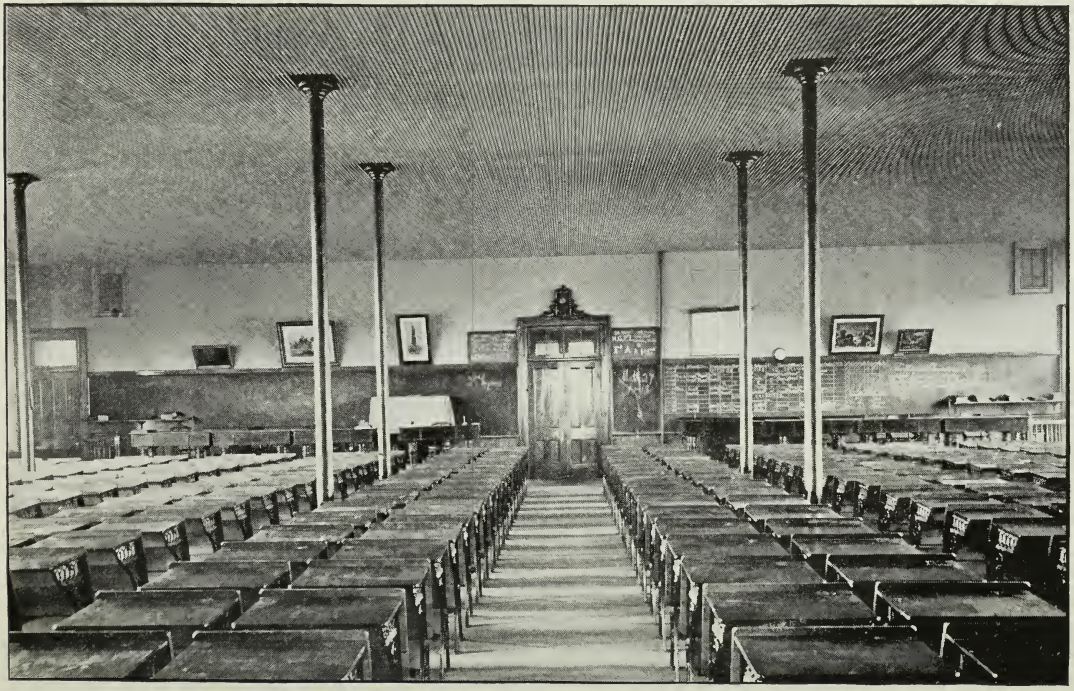
Advanced Psychology.....
.....20 hours per month
Physics..... .....20 hours per month
English Literature 20 hours per month
Mediæval History.20 hours per month
Illustrative Teaching and Methods
.....12 hours per month

SECOND TERM.

Advanced Psychology, 8 weeks..
.....20 hours per month
Philosophy of Education, 4 weeks
.....20 hours per month
Shakespeare and Themes.....
.....20 hours per month
Physics.....20 hours per month
Illustrative Teaching and Methods
..... .....12 hours per month
Practice Teaching in Model School
.....20 hours per month

THIRD TERM.

Philosophy of Education.....
.....20 hours per month
Bookk'ping, 8 weeks...20 hrs. per mo.
School Laws, 3 weeks.....
..... .....20 hours per month
Chemistry.....20 hours per month
Illustrative Teaching and Methods
.....12 hours per month
Practice Teaching in Model School
.....20 hours per month



NORMAL ASSEMBLY ROOM.

# ANALYSIS OF COURSE OF STUDY.

## READING.—First Year, First Term.

The Work.—Webster's Phonetic Chart.

1. A thorough mastery of the forty-four elementary sounds and the phonetic value of the various diacritical markings in words and syllables.

2. Rapid oral practice upon lists of selected syllables.

The purpose of the above drill is to enable the student to recognize instantly the value of diacritical markings.

3. Twenty principles of pronunciation are learned and their application observed in the oral phonic analysis of about seven hundred words, selected from the vocabulary of ordinary conversation.

4. Daily practice in oral reading. Selections: (*a*) Which arouse the pupil mentally and physically, thus cultivating an animated rendering; (*b*) which stimulate the emotional nature, and create a desire to make the thought effective, thus stimulating to a clear and distinct presentation of the thought, and an attractive and unconscious bearing; (*c*) which require sudden transitions from one emotional state to another, thus cultivating flexibility and naturalness of expression.

5. Practice in reading second and third grade matter receives some attention. In this work students are required to illustrate various methods of leading the reader to the correct expression, without employing the principle of imitation.

## READING.—First Year, Second Term.

Two plays of Shakespeare form the text of the term's work. The following plays are used: Macbeth, Julius Cæsar, Henry VIII., Merchant of Venice, As You Like It, Twelfth Night, Henry IV. Part I.—In this work special stress is laid upon the natural but expressive and forcible rendering of the thought. All of the time that can be spared from the thought analysis is devoted to practice and drill in oral reading. In the thought study some collateral reading is required on each play. At least one commentary is read, and, if the play is historical, the history to which the play relates is read. From one to two hundred lines in each play are memorized. The methods of teaching reading in the lower grades are discussed in a series of lessons upon that subject.

## GEOGRAPHY.—First Year, First Term.

Introduction. What Geography treats of. The content of Geography. Why Geography should be taught in the schools. 1. For the mental discipline that may be obtained from it. 2. For the knowledge that it contains. 3. As a basis for the study of other subjects. 4. For its value in connection with commerce. 5. For its refining influence.

*Methods.*—The analytic and synthetic, with the advantages and disadvantages of each. Geography can be taught scientifically; the proper sequence of topics should be followed, and the relations of cause and effect clearly shown.

*Topics in Preparing for Geography.* — The making of correct mental pictures lies at the basis of all true study of Geography; hence, Position, Direction, Distance, Surface, Form, and Color should be the first topics. Map representation with the idea of scale: 1. Map of the school room floor; 2. Map of the school yard and immediate vicinity. Study of the land and water forms in the home neighborhood. The home stream. Why so situated? Its source, banks, bed, mouth, tributaries. Descriptions of larger streams. Pond, lake. Description of lakes. Sand modeling. Climate: The atmosphere; effects of heat and cold upon the atmosphere; why summer is warmer than winter. Evaporation. Condensation: Rain, hail, snow. Circulation of the water; benefits to mankind. Vegetation: Kinds, uses. Animals: Domestic, wild; benefits to man. Minerals: Mines, miners. Races of Men: White, black, yellow, brown; and homes of different races, customs, manners, occupations, education, religion, government. Home Town: Surface, drainage, climate, crops, animals, manufactures, railroads, commerce. Home County, as above: County seat, notions of government. Home State, as above: Capital; principal rivers, principal crops, animals, cities, with the reason for the selection made; why the principal cities are so located; commerce, showing chief exports and imports.

*Intermediate Grades.*—Shape of the earth. Motions of the earth, with their consequences. Proper reading of a map. To distinguish between land and water as represented on a map. Forms on the map are symbols, and stand for things. The things themselves should be studied. Study of the hemispheres, with reason for names. Study of the continents. Differences and resemblances noted. Number. Comparative size, etc. Study of principal bodies of water. Position, with reference to continents. Oceans, seas, gulfs, etc. Plan for the study of a continent: Fitted to home continent.—Position, comparative size, shape, outline, surface, drainage, climate, vegetation, animals, man, minerals, political divisions. Study of the United States. Follow plan for study of a continent. Sand modeling. Model different forms of land and water. Advantages of sand modeling. Abuses. Study of States and Territories: Follow the natural features, such as water-sheds, river-courses, etc., as far as possible. Forming mental pictures, and representing these pictures in maps with the crayon or pencil, and in the sand. Study of chief cities. Determining the reason for their location, principal industries, and prosperity. Study of the principal railroads, showing their importance. Reason for their location, etc. Study of government, productions, manufactures, commerce, minerals. Showing chief crops, minerals, manufactures, etc., of different sections, with reasons for the same, so far as possible.

## GEOGRAPHY.—First Year, Second Term.

*Grammar Grade.*—Astronomical Geography.

1. Definition of terms.

2. Shape of the earth: (*a*) Proofs of its rotundity; (*b*) Proofs of its oblateness.

3. Motions of the earth and their consequences. (*a*) Rotation on axis; day and night; axis: poles; equator; parallels; meridians; latitude; longitude; zenith; nadir; vertical line of observer; horizon. (*b*) Revolution around the sun; earth's orbit, plane of earth's orbit,

4. Declination of earth's axis. Movement of vertical rays; position of tropics; polar circles; width of zones; circle of light; diurnal circle; change of seasons; reasons for difference in length of days. Tests.

5. Study of South America. Position, size, shape, contour; relief; drainage; climate, effect of altitude upon climate; principal trees; plants; principal crops; principal animals (wild and domestic); inhabitants, with brief treatment of their origin, customs, homes, governments, etc. Sketch principal river systems. The different countries with their capitals, and a few other cities. What render the cities important. What the continent produces for exportation. What it imports. Great Britain and Ireland. Close relation of the United States and Great Britain. Importance of the kingdom; small in area, but great in power and wealth. Outline; surface; principal rivers; climate; crops; manufactures; commerce. Principal cities, noted for manufactures; commerce; as educational centers; centers of historical interest; connected with famous literary works. Reasons for more manufactures in some localities than in others. Tracing of cause and effect so far as possible. Sketch-maps made of important localities. Continental Europe: Position; ragged outline; importance of study of outline, or contour; benefits arising from irregular coast line; surface; drainage; principal river systems sketched; climate; crops; dependence of crops upon climate. Study of different countries. Comparative importance of each; in what respects important; productions, such as minerals, crops, domestic animals, and manufactures. Principal cities. For what noted, manufactures, commerce, schools, historical events. Governments, customs, homes, etc. Much sand modeling and sketching. Asia: Outline; relief; backbone of Asia-Europe; drainage (principal rivers only); climate; effect of great plateaus and high mountain barriers; great forests; great deserts; great plains. Different countries: principal productions; importance to commerce; leading cities; principal exports; imports. The people; their governments; religions; homes; costumes; customs; food; education, etc. Africa and Oceanica. Studied after the same general plan as Asia, but more briefly, excepting Australia, which, because of its importance, is studied somewhat carefully.

ARITHMETIC.—First Year, First Term.

Topics.

I. *Oral Analysis of Problems from Stoddard's Intellectual Arithmetic*, four weeks.—The special purpose of this work is to secure precision of thought and expression. Attention is called to the nature of arithmetical reasoning, the use of the syllogism and enthymeme. The language of the analysis must be derived from the operations with objects.

II. *Primary Arithmetic*, four weeks.—(*a*) Purpose—To outline a course in number for the first four years, and develop and illustrate the principles and methods of instruction. (*b*) Topics: 1. The logical order of number knowledge. 2. The use of counters, cards, and other aids in teaching number facts to 10, in developing the decimal system, in teaching the fundamental operations in written arithmetic. 3. Oral language, forms of description and analysis appropriate to the several stages. 4. Forms of written work. 5. Number stories and drill exercises. 6. The proper use of a primary text-book.

III. *Factoring, Fractions, etc.*, seven weeks.— (*a*) Purpose.— 1. To organize the student's knowledge of Arithmetic by deriving all number-relations and processes from the simple idea of addition, and the grouping of numbers in the decimal system. 2. To suggest methods and devices for teaching the several topics. (*b*) Method. Fundamental principle. Every process in Arithmetic should be learned as a rational process; *i. e.*, an operation with numbers of things. From concrete examples, there should be a conscious generalization of the process in the form of a rule; finally, long-continued drill until the process with the mere symbols becomes mechanical. Accordingly what can be done with integers is first learned from splints, grouped into bundles in accordance with the laws of the decimal system. Fractions are investigated by folding and cutting paper circles and paper squares. The oral description and written representation of the operation thus discovered are succeeding stages. (*c*) Topics. 1. Notation—Laws of the decimal system and the Arabic notation; comparison with systems of different radix. 2. Fundamental rules—contracted methods. 3. Factoring—principles of factoring; demonstration of tests of divisibility; greatest common factor; least common multiple. 4. Cancellation and straight-line analysis. 5. Fractions—the fractional unit; the functions of the denominator; illustration and demonstration of the six principles upon which the various operations depend. Ordinary text-book topics in fractions. In these the central thought is that operations with fractions are fundamentally the same as operations with integers, the only difference arising from the different way of representing the unit. 6. Decimal Fractions—the peculiar notation; reading and writing pure and complex decimals; reduction of common fractions to decimals; repetends and their simpler laws; effects of moving the decimal point; limits of accuracy in multiplication and division. Oughtred's Contracted Methods.

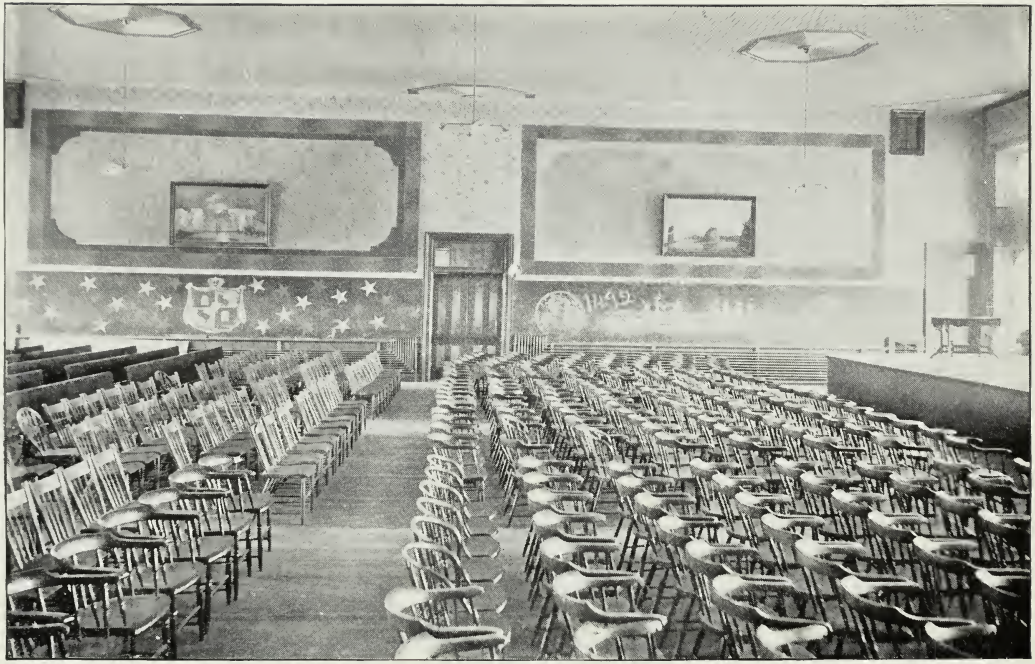
## ARITHMETIC.—First Year, Second Term.

Topics.

I. *Weights and Measures*, three weeks.—Purpose.—1. To interest the student in the derivation and meaning of our standards, the history of the calendar and kindred topics. 2. To inform the student in regard to the conditions that obtain in problems in carpeting, papering, plastering, land and lumber measure, fencing, the measurement of bins, tanks, and cisterns, and other practical problems. Topics: 1. Tables of length, weight, value, etc. 2. The various problems in *reduction* of compound numbers. 3. Addition, subtraction, etc. 4. The interval between two dates. 5. Changing from one system to another. 6. The metric system. 7. Longitude and Time: Construction of comparison table, local and standard time, the international date line.

II. *Square and Cube Root*, two weeks.—Process is derived from the geometrical applications; *i. e.*, finding the side of square, or edge of cube, whose area, or volume, is known.

III. *Mensuration*, two weeks.—Rules of Mensuration are derived from some sort of analysis of the forms measured; thus the ratio of the circumference of a circle to its diameter is approximated by measuring carefully several cylindrical bodies and averaging quotients obtained by dividing each circumference by its diameter. The various plane



NORMAL HALL.

figures and solids are treated in the following order: Rectangle, rhomboid, triangle, trapezoid, circle, ring; rectangular prism, prism, cylinder, triangular pyramid, cone, sphere, shell, frustum.

IV. *Percentage*, five weeks. Method.—The same forms of analysis are used as in common fractions. The three fundamental cases are carefully studied, and their applications shown in Profit and Loss, Commission, Stocks, Insurance, Taxes, Interest, Discount and Exchange. In these applications, emphasis is laid on the nature of the business, to which percentage is applied. The number-work becomes subordinate.

## ALGEBRA.—First Year, Third Term.

I. *Algebraic Notation—Fundamental operations.*—Especial attention is given to the reading of algebraic expressions, the discussion of definitions, positive and negative numbers, and the derivation of the laws of the fundamental operations. Processes and principles are arrived at by deduction from definitions, rather than by generalization from particular instances.

II. *Factoring and Fractions.*—These subjects are treated with more thoroughness than in any of our elementary text-books. The method applicable to each class of problems in factoring, is formulated in a rule, describing the case and the mode of discovering the factors.

III. *Simple and Fractional Equations—Problems.*—The significance of the several transformations of equations. How to state a problem.

## GRAMMAR.—First Year, First Term.

Theme: The sentence.

1. Sentence treated as the expression of a thought. (*a*) Sentence and its elements simple or complex as the thought or the ideas constituting it are simple or complex.

2. Sentence classified on the basis of form—simple, complex, and compound.

3. The Simple Sentence: All constructions that may appear in the Simple Sentence, including Participle and Infinitive constructions, analyzed.

4. The Complex Sentence: Characteristic feature—the Subordinate Clause—Substantive, Adjective, or Adverbial.

5. Different forms, offices, connectives, contractions, and transpositions of clauses considered.

6. The Compound Sentence: No distinctive feature; chief consideration, the thought—relation between the members.

7. Sentence classified on the basis of meaning as Declarative, Interrogative, Imperative, and Exclamatory.

8. General: Directions and drill in capitalization and punctuation in connection with each form of sentence and the idiomatic constructions of the language.

*Professional Instruction.*—Grammar, the Science, approached through Language, the Art.

2. Language Teaching:—(1) Purposes: (*a*) Correctness and Facility of Expression. (*b*) Uplifting and Cultivating the Imagination. (*c*) Clearness and Continuity of thought. (*d*) Refinement of mind and the

cultivation of a taste for good literature. (*e*) Development of character. (2) Kinds: Oral and Written. (3) Material. (*a*) From nature: connect with science. (*b*) From Literature: should be classic. (4) Method suggested; four steps. (*a*) Preparation on points not understood. (*b*) Presentation of matter. (*c*) Generalization; derivation of lesson. (*d*) Application of lessons. (5) Written Work: Purpose—a mastery of form. Form embraces—(*a*) Penmanship. (*b*) Spelling. (*c*) Punctuation. (*d*) Capitalization. (*e*) Grammatical structure. (*f*) Rhetorical arrangement. (*g*) Appearance on the paper. (I.) Margins. (II.) Indentations. (III.) Use of hyphens, etc. (6) How meet these difficulties? Long-continued practice in forming sentences. Three kinds of exercises—Sentence, Composition, and Narrative Exercises. (7) Purpose of Sentence Exercise: to lay a foundation for a knowledge of grammatical structure. (8) Purpose of Composition Exercise: to secure interest and facility in composing. (9) De Garmo's "Language Work below the High School" used in class. (10) Historical resumé of the development of Language Teaching studied. (11) Student taught to examine the book from the teacher's standpoint; the two-fold character of the exercises; the development of different forms of the sentence, etc., observed. (12) A list of fifteen stories now employed in the training-school presented; their literary and moral value noted. Students thus introduced to Language-teaching.

GRAMMAR.—First Year, Third Term.

Line of work two-fold:

1. Classification, modifications, and uses of the different parts of speech. (1) Special attention to uses of tense and mood forms in principal and subordinate clauses. (2) Some correction of false forms.

2. A thorough application of what has been learned in the Analysis and Etymology made to Whittier's Snow-Bound, Lowell's Vision of Sir Launfal, Scott's Lady of the Lake, or some equivalent selection.

General: Text-book used in both terms' work: Higher Lessons in English, Reed and Kellogg.

UNITED STATES HISTORY.—First Year, Third Term.

*Professional.*—Attention called to the material to be used, and to the manner of presenting it to pupils of the lower grades.

*Primary Grades.*—Material. 1. Fairy Tales.

2. Bible stories.—(*a*) Characters of whose childhood and youth most is known: Joseph; Moses; Samuel; David; Jesus; etc. (*b*) Abraham: Jacob; Daniel; Paul; etc.

3. Stories of adventure.—1 Those that occurred near home; (*a*) experiences of hunters; fishermen; travelers. (*b*) Dangers from floods; deep snows; high winds; prairie fires; etc. 2 Those that occurred remote from home. On the railroad; in stages; on steamboats; etc.

4. Stories about Indians—Their dress; homes; canoes; hunting expeditions; war expeditions; cruelty to prisoners; sports of the children; etc.

5. Explanation of national holidays—Fourth of July; Decoration day; Thanksgiving day; Washington's birthday.

6. Biographies.—Washington; Columbus; Lincoln; Grant; Sherman; Sheridan; etc.

*Method of presentation.*—1. At first, the teacher must tell the stories. The children must not be expected to repeat them. 2. Later on, the teacher may read some of the stories, although it is better to tell them, and the children should be expected to reproduce them in their own language; orally at first, later in writing. The stories can be made the texts for the work in language.

*Purpose of the work.*—1. To awaken a historical spirit. 2. To cultivate the imagination. 3. To aid in character building.

*Intermediate Grades.*—Material. Biographies.

Discoveries.—Columbus; the Cabots; Americus Vespucci; Cartier; Hudson.

Explorers.—De Soto; Champlain; La Salle; John Smith; Lewis and Clarke; John C. Fremont.

Colonizers.—Raleigh; Roger Williams; Lord Baltimore; William Penn; Oglethorpe.

Pioneers and Indian Fighters.—Miles Standish; Daniel Boone; "Kit" Carson.

Statesmen.—Benjamin Franklin; Thomas Jefferson; Alexander Hamilton; Daniel Webster; Henry Clay; Abraham Lincoln.

Generals.—Washington: Greene; Scott; Grant; Sherman; Sheridan.

Naval Officers.—Isaac Hull; Decatur; Perry; Farragut.

Inventors.—Whitney; Fulton; Morse; McCormick; Howe; etc.

History of Typical Colonies.—Plymouth; New York; Rhode Island; Maryland; Pennsylvania; Georgia.

Social condition of the people at different periods.—Troubles with the Indians. Manner of living: Homes; clothing; customs; social usages.

Wars.—King Philip's War. French and Indian War: Ticonderoga; Quebec. Revolutionary War: Bunker Hill; Valley Forge; Yorktown. War of 1812: Lundy's Lane; New Orleans. Mexican War: Buena Vista; Cerro Gordo. The Civil War: Fort Sumter; Merrimac and Monitor; Malvern Hill; Gettysburg; Vicksburg; The Wilderness; Surrender of Lee.

*Method.*—A text-book may be used, but better results will be obtained without, if the teacher is prepared. The narrative form should be preserved throughout. There should be a vivid picturing of men and events. Pictures and brief historical poems will add much to the interest and value of the work.

*Grammar Grades.*—Material: 1. A good text-book on the subject. 2. One or two histories of the United States, more extended than the text, for reference. 3. A few historical novels noted for the vividness and truthfulness of their descriptions. 4. Collection of poems founded on incidents in American history.

*Method.*—Frequent reference should be made to the work in the preceding grades. The narrative form should still be used. Attention should be given to the causes which led to important results. The virtues of the people should be pointed out. Their resistance to oppression, their sacrifices for the right, and their moderation in victory should be commended. Throughout the entire work, the patriotism of the fathers should be held up for the emulation of their sons. And the truth should be emphasized that there can be no true freedom where there is not a cheerful obedience to law.

*Academic.*—Condition of Europe at time of discovery of America. 1. Granada conquered by Ferdinand and Isabella. 2. The "War of the Roses," in England, closed shortly before by the battle of Bosworth. 3. Eve of the Reformation. 4. Sad condition of the common people.

Claims of the Northmen considered.

Columbus—Youth; manhood; seeking for aid; aid obtained; the first voyage; land discovered; return to Spain; reception at Barcelona; effect of discovery on Europe; other voyages: results; old age; misfortunes; injustice; death.

Other Spanish discoverers and explorers.

English discoverers and explorers—The Cabots; Drake; John Smith, etc.

French discoverers and explorers—Verrazzani; Cartier; Champlain; LaSalle; Marquette; The Jesuit Fathers.

Dutch discoverers.

Colonization—Spain in the south; England in the center; France in the north, south, and west.

Growth of the Colonies—English colonies surpass the others in wealth and numbers.

Troubles—Between English and Spanish colonies. Between English and French colonies. Nearly all of these troubles grow out of troubles in Europe.

French and Indian War—Cause; principal events; results; training school for Revolutionary War.

Internal troubles of English colonies—Indians; religious troubles; local jealousies.

Life in the Colonies.—Religion; education; homes; dress; customs; industries; mode of travel; social usages; growth in wealth and population.

Revolutionary War.—Remote causes; immediate causes; principal events; principal actors; self-control of the people; respect for law.

"The Building of the Nation."—Articles of Confederation; their insufficiency; danger of disintegration; making the Constitution; the Constitution contrasted with the Articles of Confederation.

Growth of the Nation.—The president; financial policy fixed; internal troubles; foreign policy fixed: troubles with France; troubles with Barbary States; troubles with England.

War of 1812.—Causes; principal events; results.

Admission of States.

Inventions.

Railroads.

Development of material resources.

Slavery.—Introduction; legislation affecting slavery.

Mexican War.—Cause; principal events; results; acquisition of territory; discovery of gold in California; result of the discovery.

The Civil War.—Causes; principal events; results; abolition of slavery; the "New South."

History of the Nation since the Civil War.—Admission of States; political parties; political policies; labor movements; progress in the arts and sciences; achievements in literature; study of political and domestic economy; general prosperity.

OFFICE AND RECEPTION ROOM.

## ELEMENTS OF PEDAGOGY.—First Year, First Term.

*Purpose.*—To interest the student in the study of the child as the true center of gravity for all educational doctrine and method, and to show the development of this principle in the history of modern education. Sense perception, as the first and fundamental form of mind activity, is the basis of the term's work.

*Topics.*—1. Conditions necessary to mind growth; the senses; the environment. 2. Does the new-born infant see, hear, etc.? 3. The beginning of psychical activity, as first aroused through sense perception. 4. Story of Laura Bridgman. 5. The first sense percepts. 6. Sense perception deals with the individual object. 7. Limitations of sense perception as a means of acquiring knowledge. 8. A higher stage of mind activity, the perception of relations. 9. The class notion: how it is developed in the experience of the child. 10. The two poles of mental activity: the individual notion and the class notion. It is the chief business of education to pass from distinctly perceived individual notions to clear, general notions.—*Pestalozzi.* Quick's Educational Reformers, revised edition, is here introduced, and used as a text-book for the remainder of the term.

*Topics.*—1. The condition of the schools at the beginning of the seventeenth century. 2. Renascence. 3. John Amos Comenius. 4. The Orbis Pictus. 5. The fundamental principle of Comenius, "There is nothing in the understanding that has not been previously in the sense." 6. The picture as an educational instrument. 7. The educational doctrine of Comenius summed up in principles. 8. Jean Jacques Rousseau. 9. Emile. 10. Rousseau's fundamental principle, "Everything is good as it comes from the Author of nature; everything degenerates in the hands of man." 11. Education natural and negative. 12. Furnish the child a proper environment and *let him alone.* 13. Periods in the life of Emile. 14. The function of the teacher in Rousseau's system. 15. Maxims and principles of Rousseau. 16. Things false and things true in Rousseau's doctrine. 17. John Henry Pestalozzi: his biography; his characteristics as a teacher; as an educator. 18. Leonard and Gertrude. 19. Maxims and principles of Pestalozzi. 20. Frederic Froebel: (*a*) as a disciple of Pestalozzi; (*b*) as the founder of the kindergarten. 21. Play as an educational instrument.

## PEDAGOGY.—First Year, Second Term.

*Special Method* in History and Literature for the first six grades.

*Purpose.*—Discussion of principles and observation of their application to class-room exercises. *Caution* as to the method of note-taking. Neat writing, correct spelling, brief and significant statements of topics discussed, and of observations.

### CHAPTER I.

*Preliminary discussion* of principles involved in good recitation work.

1. *Attention.*—Why necessary? Means used in securing it: (*a*) By the authority and watchfulness of the teacher. (*b*) By the manner of the teacher, confident, agreeable, sympathetic, earnest. (*c*) By appealing to interest. The selection of interesting subject matter. Clear and simple manner of presentation. Graphic drawing and illustration. Vivid word

pictures and narratives. Appeal to the imagination of children and make use of their home knowledge in constructing ideas of distant objects. (*d*) Variety during the recitation.

2. *Know the subject to be taught.*—(*a*) The chief ideas and principles. (*b*) The details. (*c*) The causal relations. (*d*) Related topics in other subjects. How detailed should one's knowledge be to teach a subject? To what extent should related sciences be brought into the treatment? *Example.* Fulton's first steamboat. (*a*) Description in detail of the first trip up the Hudson. (*b*) The machinery, the boat, and its construction. (*c*) Previous life and inventions of Fulton. (*d*) Other attempts at steamboat building before Fulton's. (*e*) Value and effect of Fulton's invention. Should the principle of the steam engine be explained in this lesson?

3. *Apperception.*—The use made of children's previous knowledge in school recitations, *i. e.*, the interpretation and understanding of new objects by means of previously acquired ideas. *Sources* of apperceiving ideas: (*a*) Home experiences. Ideas gained by travel and observation. (*b*) School studies and reading of books. *Examples* of apperception: Carpet weaving as related to textile fabrics. The school house as a standard for buildings. The *importance* of conscious apperception: (*a*) Frequency of our unconscious use of old ideas. (*b*) Children often fail to use their acquired knowledge; *i. e.* they fail to think, to consider. (*c*) Closer union between a child's home and school experiences.

4. *Know the children.*—(*a*) What to know: Individual characteristics and dispositions. The abilities, faults, physical and mental weakness, and vices of children. Quick insight and judgment of children's ideas and feelings. Previous home experiences and training of children. (*b*) How to know children: By direct personal observation, thoughtful and careful. By the study of psychology and physiology. By the teacher cultivating *social* experience and tact outside of school. By reading and appreciating the best children's books; also the best works of fiction by great novelists and poets; also the best historical biographies and memoirs. By studying the lives of educators like Mann, Arnold, Pestalozzi, Froebel.

5. *Requirements for good oral work.*—Vivid presentation by teacher. Full and complete reproduction by children. Outlines of topics made by teacher. A basis for reproduction. Outlines preserved in blank books of children.

## CHAPTER II.

*Application of previous principles.*

1. Illustrative lesson from history stories. Topic: Fremont and party crossing the Sierra Nevada. Outline of lesson: 1. Plan of the whole trip. 2. Journey along the east slope. 3. Survey of the situation. 4. Dangers and difficulties. Criticism and discussion of this lesson: 1. Manner of presentation; diagram and map. 2. Reproductions of children halting; why? 3. Importance of Geography. 4. Use made of outlines of topics. 5. Incidental language drill.

2. Illustrative lesson on LaSalle. 1. (Review). Tonty and the Indians. 2. (Advance.) Tonty's journey to Green Bay. 3. LaSalle's return and search for Tonty. 4. Confederacy of western Indians. Criticism of this lesson: 1. Success of the children in telling the story. 2. Study the *causes* in the story. Questions to this end: 3. How far

must geography be used in history? 4. How many pupils were called upon?

3. *Conclusions* from lessons observed: 1. Necessity of vivid and graphic presentation by the teacher. 2. Thorough reproductions by the children, and drill on the facts. 3. Value of outline, both for teacher and pupil in the logical arrangement and mastery of a subject. 4. Warning against carelessness and looseness in oral work.

## CHAPTER III.

*History and Literature in the first six grades. Chief Purpose*, to get more choice literature into all grades.

1. *Fairy Tales in First Grade.* The *merits* of these tales. (*a*) *Interest* and enthusiasm of children for the stories. (*b*) The best fairy tales *classical* and ancient as literature. (*c*) Instructive as to plants, animals, and society. (*d*) They interest both teacher and pupil, and do not lose their charm by repetition. Appeal to *fancy*. (*e*) They awaken *sympathy* between pupils and teacher. (*f*) Fairy tales illustrate *moral ideas* in attractive personification. Criticisms: (*a*) They are untrue, violating the laws of nature. (*b*) They overstimulate the fancy of children. (*c*) Many of the stories are foolish. Natural Science more interesting. (*d*) Fairy tales belong to the home. Comparison of faults and merits, and conclusion.

2. *List of Fairy Tales used in First Grade:* The Old Woman and the Pig. The Three Bears. Little Red Riding Hood. The Fir Tree. The Four Musicians. The Little Match Girl. The Lion and the Mouse. The Discontented Pine Tree. How a Little Boy Got a New Shirt. The Anxious Leaf. The Spruce Tree. The Chestnut Boys. The Christ Child and St. Antonio. King of the Birds. The Pea Blossom. The Morning Glory Seed. The Rainbow Fairies. Nothing but Leaves.

3. *Manner of treating the stories.*—1. Vivid presentation by the teacher: Simple, clear, graphic. 2. Re-telling of the story by children. 3. Necessity of sympathy, patience, and encouragement.

4. *Illustrative Lesson by the Teacher of the First Grade. Story of the Four Musicians.* Children diffident and fearful in telling the review lesson. Quiet and encouraging manner of the teacher. Questions in preparation for the advance lesson: Simple and clear narrative by teacher. Her repetitions. In the following reproductions teacher uses no compulsion, but persistent in getting the story from the children. Dialogue and other devices to lend life and interest to the reproductions. Children imitate the animals. Need for drill and persistence.

5. *Use of Fairy Stories in learning to read.*—(*a*) Methods of learning to read. Alphabetic, Phonic, Word, Sentence. The analytic and synthetic method combined. (*b*) *Illustrative lesson in reading.* First grade, by the regular teacher. *Sentence* from the Four Musicians, given by children. "The donkey carried sacks down to the mill for his master." Children read the sentence. *Word drill* upon the new words in different ways. The word *mill* analyzed and new words formed as hill, till, still, chill, etc. Appropriation of new words by pupils rapid. (*c*) *Discussion of this lesson.* Quickness of the teacher. Variety of her work. Playfulness in questioning. Devices to arouse interest. Script and print; how used. These sentences are also printed and put before the children for later reading. To what extent is it

practicable to substitute fairy stories, and such board work for charts? Can the stories be printed so as to serve as first readers?

CHAPTER IV.

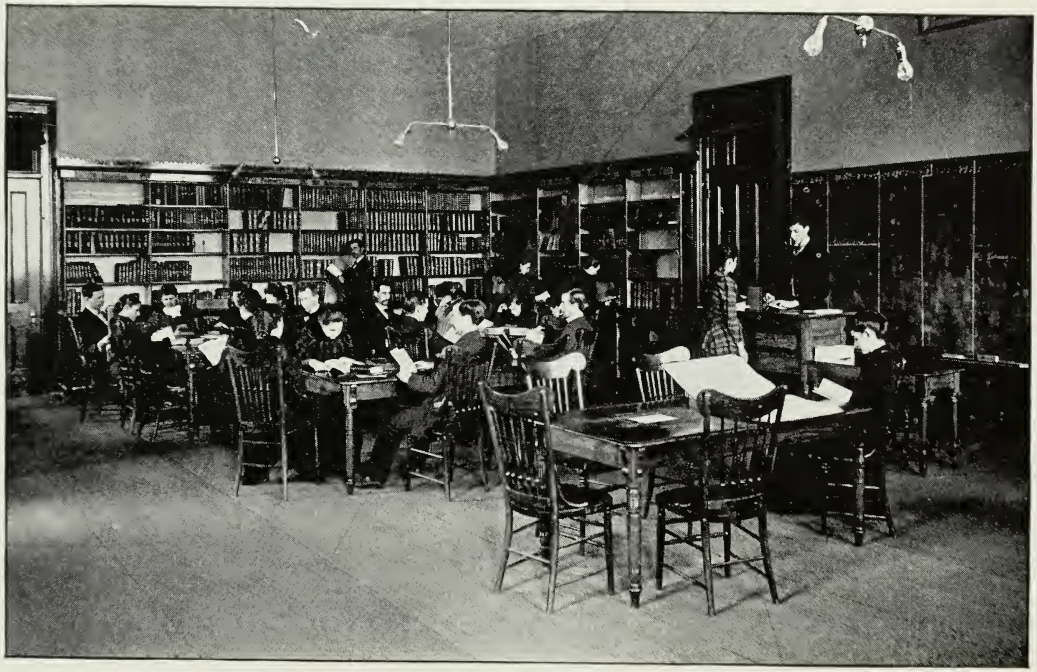
*Robinson Crusoe in Second Grade.*—(*a*) Interesting and instructive to children. (*b*) The common occupations of life made interesting. Children study their *home* more closely in Crusoe; *e. g.*, shoemaker, tailor, brick maker, carpenter, fruit grower. Crusoe is a type of man's early struggle with nature. Very realistic and subject to natural law. (*c*) *Moral value* of Crusoe's story. Crusoe is reckless and disobedient in youth, serious and devout in later years. A gradual change produced by experiences. (*d*) The permanent classical value of Crusoe tested by years. The simple arts of society, and society itself, are conspicuous by their absence. The value of the home also is expressed in the intense longing felt for it. (*e*) Does the story of Crusoe belong in the home, or in the school? Its great value can only be seen with a teacher. The relations of the story of Crusoe to other studies are many. Plants animals, geography, language, reading.

CHAPTER V.

*The Tales of Troy for Third Grade.*—(*a*) The story an *interesting* one to children. It is a classical type of the heroic age. It was the bible of the Greeks, and is a classic everywhere. The heroic age in other countries. Tell, Bruce, Seigfried. (*b*) The stories are *instructive.* Ships, cities, commerce, palaces, sacrifices, war, geography, and many customs described. Greek life pictured vividly. (*c*) *Moral* value. heroism, cowardice, manly strength, generosity, evil deeds and their punishment. Homer true to human life and character. Homer teaches by warning and by example. Interest in the *conduct* of men, the chief thing. The *Odyssey* as a story suited for third grade. It belongs earlier than the Iliad, because simpler. Ulysses a hero, adventurer, and wise man.

CHAPTER VI.

*American History Stories in Fourth and Fifth Grades.*— (*a*) Great abundance of American history stories. (*b*) The *best characters* should be chosen. (*c*) *Biographies* most suitable and valuable to children. Nearly all classical materials of the great poets are personal and biographical; *e. g.*, Shakespeare's plays, Milton's Paradise Lost, Scott, Hawthorne, Dickens, etc. (*d*) Stories of the earlier or pioneer epoch are best suited to children. Conditions of life simple; *e. g.*, Champlain, Marquette, Columbus, Magellan, John Smith, William Penn. Children should understand the circumstances and environment of a man to judge his actions. Stories of the revolution and of the civil war have a too complex setting for children. (*e*) These early biographical stories are *instructive.* Describe fully many important formative events in history. Give a vivid picture of early hardships and privations. Touch many points in geography and natural science. (*f*) Their *moral value* is much above the average of history. Hardy, sturdy characters described under conditions that bring out their faults and virtues; *e. g.*, La Salle, Fremont, Clarke, Lincoln, Washington, in early life. Many acts of the highest



A CORNER IN THE READING ROOM.

morality clearly presented. Detailed biographies of our best characters are the best historical material upon which to cultivate moral judgment. (*g*) These stories should be studied in fourth and fifth grades as a preparation for history proper in grammar grades. List of pioneer history stories.

CHAPTER VII.

*Study of Colonial History in Sixth Grade.*—(*a*) The history of several important colonies in detail; *e. g.*, "Pilgrims and Puritans." (*b*) Reading of Miles Standish, Evangeline, etc. Knickerbocker Stories, Sketch Book. (*c*) The simple beginnings and early development of political ideas fully explained.

## SPECIAL METHOD IN GEOGRAPHY.

CHAPTER I.

*Home Geography.*—1. Observations of home streams, surface, groves, weather phenomena, occupations, products, food, clothing, and building materials; observation of sun, moon, and stars, commerce in the local trade centre, and local forms of government. 2. *Study of the World as a Whole.*—A globe, motions of the earth about the sun, seasons, continents, oceans. 3. *From the Home Outwards.*—The town and state, with a few of its leading topics; *e. g.*, In Illinois, grain raising, the coal mines, the Illinois river and canal, Chicago. Surface and boundaries of the state. The neighboring states of the Mississippi valley. The United States and North America. 4. *The Selection of Typical Topics.*—Full and detailed treatment of such important topics; *e. g.*, Hudson River, Chicago, Pike's Peak, Lake George. A coal mine. The manufacture of cotton goods. Lumbering. 5. Graphic illustration and pictures. The constructive imagination must be very active in both pupil and teacher. 6. *Causal Relations.*—The explanation of cities, industries, lines of traffic, and climate is found in certain causes. Commercial *series* should be formed dependent upon history and geographical structure. 7. The relation of geography to other studies is important and vital. History, natural science, and language are intimate friends of geography. 8. The teaching of geography should be largely oral. It is graphic and descriptive and calls for imagination and lively presentation.

CHAPTER II.

*Illustrative Lessons in Geography.*—1. The *home village* as a trade centre. Grains, fruits, meats, wood, and dairy produce from the gardens and farms. The goods purchased by the farmers and gardeners at the stores and whence they come. 2. *Lake George.*—Map and description, its elevation, history, compared in size with Geneva lake, Salt Lake, Lake Superior. 3. *Erie Canal.*—Locks, history, present traffic. Comparison with railroads in speed and cheapness. 4. *A Coal Mine.*—Locating the coal. Sinking the shaft. Ventilation of the mine. Dangers. Machinery. Uses of the coal. 5. *St. Louis.*—Advantages of its situation. History. Railroads and rivers. The bridge. Raw products received. Wholesale business. Manufactures. Comparison with Chicago.

## PEDAGOGY, Third Term, First Year.

### *Natural Sciences in the Grades.*

#### CHAPTER I.

*Special Method.*—The *purposes* of natural science teaching, as historically manifested. 1. Curiosity and entertainment. 2. Utility, an acquaintance with useful and hurtful animals and plants. 3. Accurate description of specimens and cultivation of the observing powers. 4. The ability to classify and determine the place of each individual in a system. 5. The development of general laws and consequent insight into nature's work; the environment. 6. Life histories of plants and animals. 7. Life groups, *function* of the parts and the *adaptation* of each living thing to its environment. All of these purposes should be combined and realized in an adequate plan of nature study.

#### CHAPTER II.

*Method of treating objects in natural science.*—1. Let the children see and describe the objects. The teacher should simply keep them on the right track. 2. External characteristics should not be made the chief points of description. 3. Raise some general problem in the life of a plant or animal and weave in the external characteristics as incidental to this purpose. Causal relations in regard to structure and function should be made central in the discussion. 4. Select specimens of plant or animal life that are typical of large classes, and then study the individuals with great fullness of detail, both as to life history, environment, and adaptation. 5. Comparisons of this type specimen with others of the same order or genus and contrasts with those of entirely different nature are very helpful in discriminating the chief characteristics of the type. 6. Keep the topics treated clearly outlined in logical order, and on this basis secure full and accurate descriptions and reproductions. The outlines should be neatly kept in blank books and form the basis of comparisons, reviews, and compositions. 7. The teacher may add much to the interest and instructive phase by presenting additional facts not accessible to the children. 8. Excursions are necessary for the collections and for observation. Nature should be studied in her living forms and natural environment as far as possible. 9. Graphic representation and drawing are of great value to both teacher and pupil.

#### CHAPTER III.

*The selection of materials.*—1. Plants and animals are the best studies for the children of lower grades. 2. Minerals, chemistry, and physics and other sciences increase in interest for older pupils. 3. Home plants and animals are better than distant ones. Interest in the commonest objects, as oxen, cats, sunflower, etc., may be very great. 4. Select according to the season those things most accessible. 5. There should be a good deal of wide, general observation, but the major part of the work should consist in a detailed study of a few typical specimens, with a very full biography of its life and environment, parts and function.

### CHAPTER IV.

*Illustrative lessons.*—1. *The mole.* Its adaptation to a home underground. Broad fore feet and claws, powerful forearm and muscles. Snout. Small, hidden eyes; peculiar fur. Teeth for crushing insect food. Voracious appetite. His home habits in winter. 2. *The cactus.* Its adaptation to a dry climate. 3. *The ox.* As type of the ruminants. The four stomachs. The teeth. Food. Great variety of uses of ox. 4. *The maple tree.* Sugar maple. Circulation of sap, building up of fibres, work of the leaves, life of the tree. Function of all the parts. The bark, roots, etc. 5. *The cat.* As type of the cat family. Study the eyes and teeth, nocturnal habits, adaptation of feet, claws, teeth, whiskers, and bodily structure to catching its prey. 6. *The duck.* Mallard. Type of water birds. Feet, feathers, migrations, food, uses. 7. *The honey bee.* Type of the colonizing insects. Structure of insect Getting honey. Division of labor. Structure of the comb.

## READING.

### CHAPTER I.

1. The proper combination of the sentence, word, and phonic method in first learning to read. 2. When to work analytically, when synthetically. 3. The use of sentences from natural science and literature. 4. Use of the blackboard, of charts, and of readers. 5 Special devices: (*a*) Use at first simple words of phonetic spelling. (*b*) Clear phonic drill. (*c*) Interpret new words by their familiar sounds. (*d*) Make a list of words with a different combination. Let the children form such lists. (*e*) Avoid drawling and get expressive, natural tones. (*f*) A very sympathetic manner with young children. (*g*) Quick and varied drill. (*h*) For busy work let children construct words and sentences. (*i*) Reading and writing run parallel from the first.

### CHAPTER II.

Reading above the primary grades.—1. *Purpose.*—Increased power to render thought expressively. Secondary purpose, information and appreciation of literature. 2. *Select* pieces suited to instruct and interest the pupils. Read whole classical selections, not fragments. 3. *Drill.*—Read less in quantity and make steady improvement. 4. Preparation of the lesson by the teacher, by the pupil. 5. Cultivate slow and distinct expression. 6. *Cautions.*—Position, phonetic drill, notice unaccented syllables and words and final consonants. 7. Make questions and criticisms specific. 8. *Expression.*—Question for emphatic ideas, for the modifications of subject and predicate, for contrasts and comparisons. Notice general style of the piece. Appeal to imagination and feeling and sense pictures. Occasional illustrative reading by the teacher. 9. *Sight reading*, occasional supplementary reading to cultivate quickness and increase information. 10. Avoid too rapid, mumbling, sing-song, irresolute reading. Avoid the careless assignment of lessons.

## LANGUAGE LESSONS.

### CHAPTER I.

Primary and Intermediate grades. 1. *Purpose.*—Drill in the correct use of oral and written English. Incidental language drill in history, geography, and natural science. 2. *Composition.*—Outlines kept from history, natural science, and geography are the basis of written compositions. Great care in writing, capitals, spelling, and paragraphing. Errors of the children corrected and discussed with the children. Compositions rewritten with avoidance of errors. Some simple rules are helpful. 3. *Exercises in Correct Oral Speech.*—Common errors pointed out and the correct forms drilled upon. Homonyms, adverbs, pronouns, and irregular verbs receive full attention. Correct *habit* is the aim, not the rules of grammar. The regular grading of this work for each term. 4. Spirit and life in this formal drill.

### CHAPTER II.

Grammar in the advanced grades. 1. *Purpose.*—Knowledge of the principles and laws of language. Grammar as an aid in correct speech. 2. Why technical grammar should be excluded from the lower grades. 3. Etymology and Syntax. 4. The inductive approach to rules and principles. 5. Parsing and diagrams. Analysis.

## SPELLING.

1. Written and oral spelling. 2. Spelling reform. 3. The spelling book. 4. Use of rules in spelling. 5. The writing speller. 6. The application of spelling to other studies.

## ARITHMETIC.

### CHAPTER I.

First Year. 1. The Grube method. Its six requirements. 2. The use of objects. Variety and simplicity. 3. First learn all the combinations in a single number in addition, subtraction, multiplication, and division. 4. Use of series first and miscellaneous drill later. 5. The drawing and writing of numbers. Seat and board work. 6. Absolute mastery of the combinations. Great variety of drill and frequent repetition. 7. Rapid and lively drill the basis of interest. 8. Learning of numbers up to ten. 9. The formal steps in primary number. 10. Illustrative treatment of the number 6.

### CHAPTER II.

Second Year. 1. Grube not followed in second grade. The decimal system. 2. Arrangement of series from easy to difficult. Treatment of pure tens first. 3. Addition and subtraction tables to 100. 4. Order of the multiplication tables, 10, 2, 5, 4, 3, 6, 9, 8, 7. 5. Tables first, then miscellaneous drill till perfection is attained. 6. Multiplication and division run parallel. 7. Objects in second grade. A large abacus.


IN THE MUSEUM.

# NORMAL DEPARTMENT.

## DRAWING.—Two Years, Two Lessons per Week.

1. *Our Aim.*—1. To teach Drawing as a language. 2. To lead pupils to seek culture from the beautiful in Nature and Art. 3. To promote mental development.

2. *General Points.*— 1. Drawing a language. 2. Drawing based upon form study. 3. Three divisions of drawing as to use: Drawing showing construction. Drawing showing appearance. Drawing of the enrichment or decoration. 4 An object may be pictured by representing its outline, its light and shade, or its color.

3. *Form Study*—in clay. (*a*) Natural objects: Fruits, leaves, vegetables. (*b*) Geometric forms: Sphere, cube, cylinder.

4. *Drawing*—Suggestions for Movement and Position. (*a*) Geometric views. Construction drawing. 1. Two views necessary. 2. Invisible edges. 3. Foreshorted views. 4. Section views. (*b*) Perspective views in outline. 1. Curved edged objects: Face view of the circle. Edge view of the circle. Oblique view of the circle. 2. Straight edged objects. (*a*) In straight position: Edges from top to bottom. Edges from left to right. Receding edges. (*b*) In-turned position: Edges from top to bottom. Receding edges. To the left; to the right.

*Color.*—1. Source of color. 2. Use of color. 3. Effect of color. 4. Theory of color. 5. Color Harmony. 6. Drawing in color: 1. From nature. 2. From common objects.

## DRAWING.—Second Year.

History. Architecture. Ornament.

*Ancient Period.*—Egyptian school. Greek school. Roman School.

*Mediæval Period.*—Byzantine school. Saracenic school. Gothic school.

*Modern.*—Renaissance.

Pupils make drawings of the characteristic elements of constructive and ornamentation.

Light and shade (with pencil). From cast. From nature. From common objects. From models.

Illustrative Drawing. From nature: cast; copy. This work is an effort to acquire skill in rapid illustrative work, and the material is gathered from any source.

## PENMANSHIP.

Outline of work.

*Purposes.*—I. To fix clearly in the minds of the pupils the following fundamental *ideas.* 1. To write well requires a correct conception of what is to be written. 2. Ability to execute that conception with pen, pencil, or crayon. 3. This ability must be gained through careful practice, for it is an acquired habit, and habit comes from repetition. 4. The practice must be careful, else instead of eliminating, the pupil will only be confirming a faulty habit. 5. It requires but little time to acquire a correct mental picture of a letter, compared with the time acquired to train the muscles to make it rapidly and easily. Hence, by far, the greater share of the time should be devoted to training the

muscles. 6. Movement is the mainspring of any good writing system, and the *muscular movement* is by all authorities conceded to be the best. 7. To improve our writing, we must improve our habits of making the individual letters. To do this, the best way is to repeat the same letter in an exercise with constant effort at improvement.

II. To make the transition—for with most pupils it is a transition —to muscular movement, and give as much drill as the time will permit, in movement exercises for the purpose of securing control of this movement.

### PHYSICAL TRAINING.

The object of the work:

1. To secure health by means of exercise, which, (*a*) raise the vital organs to their proper altitude; (*b*) relieve friction in the articulations and stimulate the vital organs; (*c*) increase the strength of the torso, while developing the extremities; (*d*) develop the relation between the muscles.

2. To make of the body a perfect servant of the mind, by securing: (*a*) normal bearing; (*b*) freedom and grace of movement; (*c*) self-command; (*d*) the proper relation between body and mind. The exercises are:

First Group. (*a*) Exercises to obtain erect position; (*b*) poising: 1. Forward. 2. Backward; 3. Up. 4. Down.

Second Group. Movements for freeing muscles of the (*a*) hips; (*b*) sides; (*c*) chest; (*d*) waist; (*e*) neck; (*f*) wrists; (*g*) knees.

Third group. (*a*) Inhaling: 1. Without arm movement. 2. With arm movement. (*b*) Bending: 1. Forward. 2. Backward. 3. Laterally. 4. Diagonally forward. 5. Diagonally backward. (*c*) Twisting body: 1. Around the left to back. 2. Around the right to back. (*d*) Reaching: 1. Laterally. 2. Diagonally forward. 3. Diagonally backward.

Fourth Group. Arm movements; with instruction in walking, marching, running, and jumping.

Advanced Work. 1. Responsive work. 2. Pantomime.

### VOCAL MUSIC.—First Year, Spring Term.

1. Methods of instruction in elements of vocal music.
2. Practice in reading in five keys.
3. Philosophy of transposition.
4. Choral practice.

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## COURSE IN NATURAL SCIENCES.

### ZOOLOGY.—Second Year, First Term.

1. Collection of Insects; Study of Insects; Principles of Classification developed by comparing and contrasting several kinds of Insects. 2. The Crayfish, studied alive and then dissected (type of Crustacea). 3. External characteristics of Birds. Analysis of Birds (Jordan's Manual). 4. Study of the following animals alive; dissection as types:—

(*a*) Earthworm (Vermes); (*b*) Clam (Molluska); (*c*) Perch (Pisces); (*d*) Frog (Batrachia); (*e*) Snake (Reptilia); (*f*) Pigeon (Aves); (*g*) Rabbit (Mammalia). 5 Study of live Hydra. 6. Study of a few Protozoa. 7. Study of Starfish and Sea-urchin (alcoholic).

Drawings and descriptions of animals studied preserved in permanent note-book.

Text-books: Packard; Colton's Practical Zoology.

PHYSIOLOGY.—Second Year, Second Term.

1. Muscle. (1) Experiments on the Muscles in our bodies. (2) Models of Human Muscles. (3) Dissection of hind leg of rabbit. (4) Structure of Muscle, (*a*) gross; (*b*) minute. (5) Action of Muscle (experiment on frog's muscle). (6) Training of Muscles (symmetrical development).

2. Bone. (1) Bones as levers. (2) Bones as protectors (brain and spinal cord). (3) Bone structure, (*a*) gross; (*b*) microscopic. (4) Joints. (*a*) Dissection of joints of rabbit's leg, and beef joints.

3. General Functions of the Nervous System, Sensation and Motion. 1. Experiments on frog, reflex action of the Spinal Cord. 2. Dissection of Spinal Cord and Brain of cat. 3. Voluntary Motion. 4. Sensation of Touch.

4. Circulation. 1. External indications of the Circulation of Blood: Heart beat, pulse, blushing, pallor, experiments on veins, etc. (*a*) Microscopic examination of frog's blood. (*b*) Circulation of blood in web of frog's foot under microscope. 2. Internal proofs of the Circulation of the Blood. (*a*) Dissection of heart and lungs (sheep or pig), (*b*) demonstration of the action of the heart, (*c*) injection of arteries, (*d*) tracing injected arteries and veins. 3. Description of Organs of Circulation and their action: (*a*) Action of frog's heart, (*b*) action of the heart, (*c*) experiments illustrating the action of the large arteries, (*d*) action of medium-sized arteries (plain muscle fibers), (*e*) veins (valves). 4. Blood and Lymph. (*a*) Microscopic examination of drop of blood from finger, (*b*) composition of blood, (*c*) coagulation of blood, (*d*) injection of thoracic duct (lymph). 5. Hygiene of Circulation.

5. Respiration. 1. Organs of respiration. 2. Mechanical process of respiration. 3. Experiments illustrating respiration. 4. Capacity of the lungs. 5. Composition of air. 6. Experiments illustrating the chemistry of respiration. 7. Experiments showing the differences between inspired and expired air. 8. Production of heat and motion in the body. 9. Comparison of the human body and a locomotive. 10. Hygiene of respiration.

6. Excretion. 1. The Skin. Functions: (*a*) Excretory, (*b*) heat-regulating, (*c*) protective, (*d*) sensory, (*e*) absorptive. 2. The Kidneys. (*a*) dissection of pig's or sheep's kidney, (*b*) action of the kidneys, (*c*) relations of the lungs, kidneys, and skin.

7. Digestion. 1. Foods and cooking. 2. Dissection of the digestive organs of a cat. 3. Study of cross and longitudinal sections of teeth. 4. The salivary glands. 5. Experiments with artificial digestion. 6. Absorption. 7. Hygiene of digestion. 8. Taking "cold," diarrhœa, bathing.

8. The Nervous System. Functions of the Brain and Spinal Cord. Hygiene of the Nervous System.

9. The Special Senses. Sight. (*a*) dissection of the eye, (*b*) experiments on accommodation, (*c*) experiments on blind spot, (*d*) experiments on color contrast, (*e*) experiments on adaptation to amount of light. Defects in vision. Hygiene of the Eyes. Smell and Taste. Hearing. The Voice and Speech. Dissection of the Larynx.

Drawings and descriptions of dissections made into book.

Text-book: Martin's Human Body (briefer course).

BOTANY.—Second Year, Third Term.

1. Planting seeds (corn and beans); their structure and growth. 2. Buds, structure, protection, arrangement, kinds, growth. 3. Study of early flowers, Hepatica, Spring Beauty. Trillium, Blood-root, etc. Study of Types: 4. Green slime (Protophyta). 5. Moss (Bryophyta). 6. Fern and Horsetail (Pteridophyta). 7. Scotch Pine and Austrian Pine (Gymnosperms). 8. Common flowering plants (Angiosperms).

Herbarium required. Notes and drawings of plants studied.

Text-book: Gray's School and Field Book.

PHYSICS.—Third Year, First and Second Term.

The topics generally indicate lines of experimental work, followed by study of the text-book. The movement in the study of each division of the subject is usually as follows: (*a*) Qualitative experiments by the student or the instructor, with preliminary definitions. (*b*) Quantitative experiments by the student. (*c*) Study of the text-book. Problems. (*d*) Recitation on both experimental work and text.

1. Measurements of length, volume, and mass, by the metric system. (*a*) Methods of linear measurement. (*b*) Practice in the use of the graduate cylinder. Methods of correct reading. Use of Erdmann's float. Errors. Determination of the volume of an irregular body. Calibration of tubes. (*c*) The balance. Methods of weighing. Practice in weighing bodies to 1 mgr.

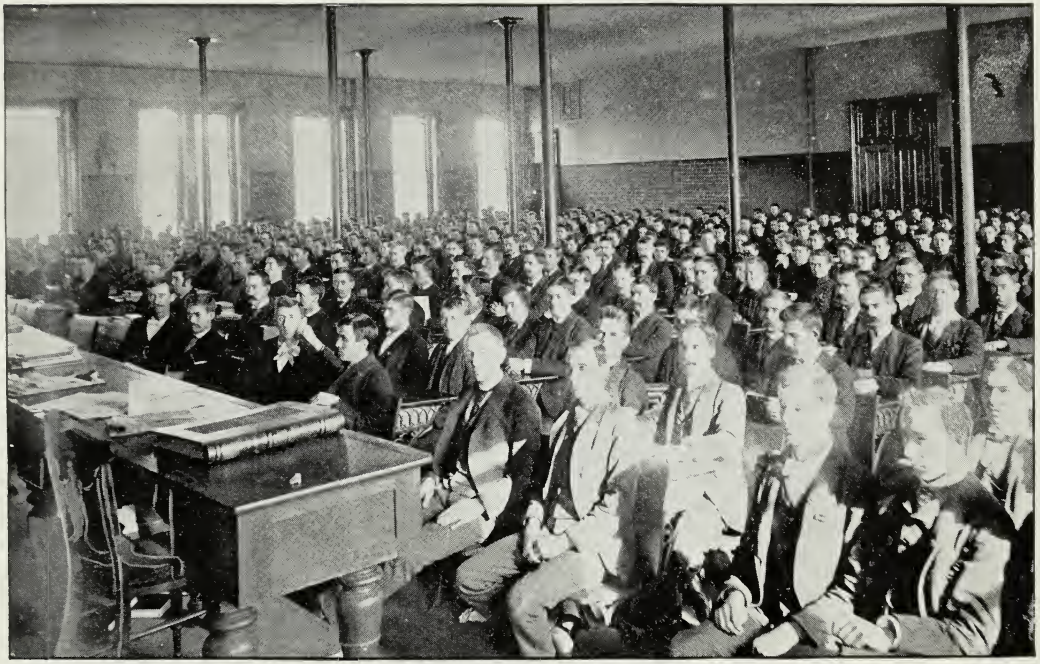
2. Density and Specific Gravity. (*a*) Determination of density of wood, glass, stone, iron, etc., by the balance. (*b*) Specific gravity of liquids by the specific-gravity bottle. (*c*) Determination of the weight lost by a solid immersed in a liquid. (*d*) Determination of specific gravity by immersion. (*e*) Liquid pressure due to weight. (*f*) Specific gravity of liquids by the method of balancing. (*g*) The hydrometer.

3. Dynamics. (*a*) The action of a force upon a body. (*b*) Composition and resolution of forces. (*c*) Graphic representation of forces; (1) acting at an angle on the same point, and (2) parallel forces acting at different points, on a rigid body. (*d*) Gravitation. Laws of motion. (*e*) Laws of falling bodies. (*f*) Projectiles. (*g*) The pendulum. (*h*) Formula for kinetic energy.

4. Machines. (*a*) Development of the laws of the inclined plane, lever, and pulley. (*b*) Machines as devices for transferring energy. (*c*) General laws of machines.

5. Hydrostatics, Hydrokinetics, Pneumatics. (*a*) The hydrostatic bellows. (*b*) The hydrostatic press. (*c*) Formula for velocity of spouting liquids. (*d*) Water wheels. (*e*) The barometer. (*f*) Pumps. (*g*) The siphon.

6. Electricity and Magnetism. (1) Frictional Electricity. (*a*) Two kinds of electrification. (*b*) Tests for each. (*c*) Electrostatic induction. (*d*) The gold-leaf electroscope. (*e*) The electrophorus. (*f*) Elec-



NORMAL DEPARTMENT.

tric density. (*g*) Electric condensers. (*h*) The Leyden jar. (*i*) Modes of discharge. (*j*) Lightning-rods. (2). Voltaic Electricity. (*a*) The voltaic cell. (*b*) Construction and use of various forms of the voltaic cell. (*c*) Action of currents on magnets. (*d*) Construction and use of the tangent galvanometer. (*e*) Astatic and sine galvanometers. Long and short coil instruments. (*f*) Electrical resistance. Conditions affecting resistance. (*g*) Methods of connecting cells. Tests with galvanometer. (*h*) Measurement of resistance. Wheatstone's bridge. (3). Magnetism. Induced currents. (*a*) General study of a Magnet. (*b*) Action of the attracted body on the magnet. (*c*) Mutual action of two magnets. (*d*) Induced magnetism. Law of induced magnets. (*e*) Mapping out magnetic fields. (*f*) Electro-magnets. Conditions affecting the strength of electro-magnets. (*g*) Methods of winding electro-magnets. (*h*) Induced currents. (*i*) The Ruhmkorff coil. (4). Industrial applications of Electricity. (*a*) The telegraph. (*b*) The telephone. (*c*) The dynamo. (*d*) The incandescent lamp. (*e*) The arc light. (*f*) Methods of wiring for electric light systems. (*g*) Converters. (*h*) Principles of the motor.

7. Sound. (*a*) Wave motion. Transverse and longitudinal vibrations. (*b*) Sound waves. Propagation of sound. (*c*) Measurement of the velocity of sound in air and in carbon dioxide. (*d*) Conditions affecting pitch of a vibrating string. (*e*) Sounding boards. Resonance. (*f*) Coincident sound waves. Interference. (*g*) The musical scale. Absolute pitch. (*h*) Fundamental tones and overtones. (*i*) The Phonograph.

8. Heat. (*a*) General effects of heat on the volume of solids, liquids, and gases. (*b*) Comparative conductivity of various solids. (*c*) Radiation of heat. (*d*) Convection. (*e*) Testing thermometers. (*f*) General effects of heat upon the temperature and physical form of solids and liquids. (*g*) Curve-plotting of temperatures for heating and cooling liquids. (*h*) Determination of melting and boiling points of solids and liquids. (*i*) Distillation. (*j*) Latent and specific heat. (*k*) The steam engine.

9. Light. (*a*) Rectilinear motion of light. (*b*) Inverted images. (*c*) Shadows. (*d*) The photometer. Distance and the intensity of light. (*e*) Plane mirrors. Location of virtual images. (*f*) Concave mirrors. Real and virtual images. Geometric constructions. (*g*) Lenses. Measurement of focal length. (*h*) Decomposition and composition of white light. (*i*) The rainbow. (*j*) Optical instruments. The eye. Microscopes. Telescopes.

## CHEMISTRY.—Third Year, Third Term.

The atomic theory is made the correlating principle of the term's work. The general movement is such as to be a gradual development of this theory. The experiments are usually performed by the students, under direction of the instructor.

1. The analysis of typical binary compounds, hydrochloric acid, water, ammonia, marsh gas. 2. Examination of the constituent elements. 3. The synthesis of binary compounds. 4. Methods of analysis and synthesis. Chemical agents. 5. Volumetric relations of the elements in each compound. 6. Chemical symbols. Nomenclature. 7. Laws of Gay-Lussac, definite proportions, and conservation of mass. 8. Chemical equations. Problems. 9. Quantivalence, illustrated by the

typical group. 10. The analysis of nitric acid. The nitroxygen series. 11. Law of multiple proportions. 12. Simple and compound radicals. 13. Electrolysis. Electro-chemical series. 14. The relation of acids, bases and salts. 15. Familiar metals. 16. Congeners of the typical binary group. 17. The halogen group. 18. Familiar carbon compounds 19. Laws of Charles and Marriotte. 20. Development of the atomic theory from the study of the preceding topics. 21. The law of Ampere. 22. The phenomena of combustion. 23. Chemistry and the conservation of energy.

## CIVIL GOVERNMENT—Second Year, First Term.

1. Necessity of government. 2. Government in the family; its purpose; nature; necessity. 3. Government in the school; its purpose; nature; necessity. 4. Town government. 5. County government. 6. State government. Historical sketch of Illinois; the northwest territory; ordinance of 1787; influence on the history of the state; Illinois as a territory; admission as a state; legal boundaries; three constitutions; relation of constitution to constitution of United States; legislative department; executive department; judicial department; state boards; state institutions; duties of the citizen to the state: of the state to the citizen. 7. Government of the United States. United States History reviewed; government of the colonies with their relation to each other and to England; the Revolutionary War; Declaration of Independence; articles of confederation; steps leading to formation of constitution; general analysis of the different departments of government; amendments.

In discussing the above topics care is taken to impress it upon the pupils, that government is constituted for the good of the people, and that its purpose is to protect them in the enjoyment of their rights. It is a creature of their own creation, intended to benefit all, and not a few at the expense of the many. Hence it is the duty of each to yield a ready obedience in order that all may receive the greatest good.

## ILLUSTRATIVE TEACHING.

### Third Year; First, Second, Third Term.

1. Preparatory work. McMurry's General Method, three hours a week.

2. Review of psychology of attention.

3. General examination of the subject of Geography.

4. Illustrative lessons with children in various stages of geographical work. Exercises conducted by teacher in charge of class, or by a training teacher. Members of Normal class write up notes for inspection by teacher.

5. General examination of the subject of Arithmetic.

6. Illustrative lessons with children in the various stages of the work. Exercises conducted by the teacher in charge of the class, or by a training teacher. Members of Normal class write up notes.

7. General examination of the subject of Reading.

8. Illustrative lessons as above.

9. Similar treatment of the remaining subjects of the Common School Course below the High School, so far as time will permit.

# Practice Work in Model School.

Second Year; Second Term, Third Term.
Third Year; Second Term, Third Term.

Each Normal student is required to teach four terms in the Training School, for forty-five minutes each day. At least one term must be spent in the Primary Grades. All practice work is performed under the immediate oversight of the training teachers. The work of criticism is both personal and general. The general criticisms are given in teachers' meetings, one of which is held each week. The special criticisms are given in grade meetings and in personal interviews. Pupil teachers must submit plans of work to their supervisor, which must be approved before being put into execution. They are held responsible for the control and general management of their classes They are expected to make personal studies of the pupils, so that they may give accurate descriptions of their characters, personal peculiarities, habits of study, and general disposition.

Generally each pupil teacher is under the observation of one or more pupil teachers, who make careful notes of the work. By this arrangement the training teachers are enabled to determine accurately the skill with which discipline is maintained in their absence.

The practice work of the pupil teachers reaches from the first grade of the Primary School through the first year of the High School. In addition to the work of instruction, pupils are required to take charge of a room during opening exercises, and to have the management of children as much as possible.

Frequent illustrative exercises, conducted by training teachers, are given to the whole body of pupil teachers. These cover a variety of subjects, but are usually given in those studies in which there is the greatest probability of lack of skill on the part of the pupil teachers. It is found that subjects like Natural Science and Literature afford the greatest difficulties to the ordinary teacher; consequently, exercises are given in those subjects more frequently than in any others.

Persons desiring to fit themselves for primary teachers are permitted to put in all of their time with the training teacher having the lowest departments in charge.

During recesses and noons children are under the general oversight of pupil teachers, who make careful studies of individual pupils as they manifest their dispositions in games or other recreations.

ANCIENT HISTORY.—Second Year, Second Term.

1. What History is; what it treats of; sources—"monuments, relics, records"; aids to history—Ethnology, Archaeology, Philology. 2. Divisions of History: Ancient, mediæval, modern. History a continuous whole. 3. Races of Mankind: White, yellow, black. The white or Caucasian the historic race. 4. Geographical sketch of the ancient oriental nations. Historical darkness in Northern Asia; twilight in Central Asia; sunlight in Western Asia. 5. Hindoostan. 6. China. 7. Egypt. 8. Chaldaea. 9. Assyria. 10. Babylonia. 11. The Hebrews. 12. Phoenicia. 13. Persia. 14. Greece. 15. Rome. The Hebrews, Greeks, and Romans, the principal factors in ancient civilization.

MEDIÆVAL HISTORY.—Third Year, First Term.

Rome under Augustus; public buildings; social conditions; nature of the government. Rome under Nero; Vespasian; Titus; Trajan; the Antonines; Diocletian; Constantine the Great; Christianity; Constantinople. The Goths: Theodosius; Alaric; Attila; Genseric. Fall of the Roman Empire in the west. Relation of the fall to world-history. Roman literature; orators; historians; poets; gladiators; slavery. The Teutonic tribes; conversion of the Franks, etc. Monasticism; fusion of the Latin and Teutonic peoples; character of Teutonic legislation. The Empire of the East; becomes Greek. Mohammed and the Saracens: conquests; east; west; north; contact with Roman Empire of the east. Crusade: Cause; results; influence on civilization. Charlemagne: dominion; purpose; achievements. The Northmen: rise of the Papal power; mission of Rome; iconoclasts; feudalism; chivalry. The Celts in Britain; the Romans: Saxons; Alfred the Great; Norman Conquest; conflict of kings with the church; Magna Charta; first Parliament; war of the Roses; the Tudors; Henry VIII.; the reformation: Mary I.; Elizabeth; the Stuarts; war between Charles I. and Parliament; Cromwell; the restoration. France, Germany, Spain, Italy. Luther: The reformation in Germany. The Ottoman Empire. Downfall of Constantinople. Influence of fall on Europe. Growth of cities. Conflict between cities and nobility. Printing. Discovery of America.

PHYSICAL GEOGRAPHY.—Second Year, Third Term.

Anatomy and physiology of the globe. Life of the globe, kinds of life, importance of contour; Relief; Relative Position; Analogies. Guyot's Seven Laws of Relief: Relief of Ocean beds; formation of the Continents. Land and Sea Climate: The Winds; the water carries distribution of the rains. Marine Currents: Cause; effects. Contrasts of the three continents of the north, and those of the south. The part which each of the northern continents has performed in history. Contrast of the Old World and the New. Characteristics of the Old World; of the New. Old World excels in animal life; the New in vegetable life. Law of life in the Vegetable Kingdom; Animal Kingdom; Man an exception. The Continents and Civilization. Inability of the Old World to attain the end of humanity; Assistance given by the New World. Action and reaction of the two worlds upon each other. The result, a higher form of civilization. Geographical march of History. "Westward the Course of Empire takes its way." Science and faith.

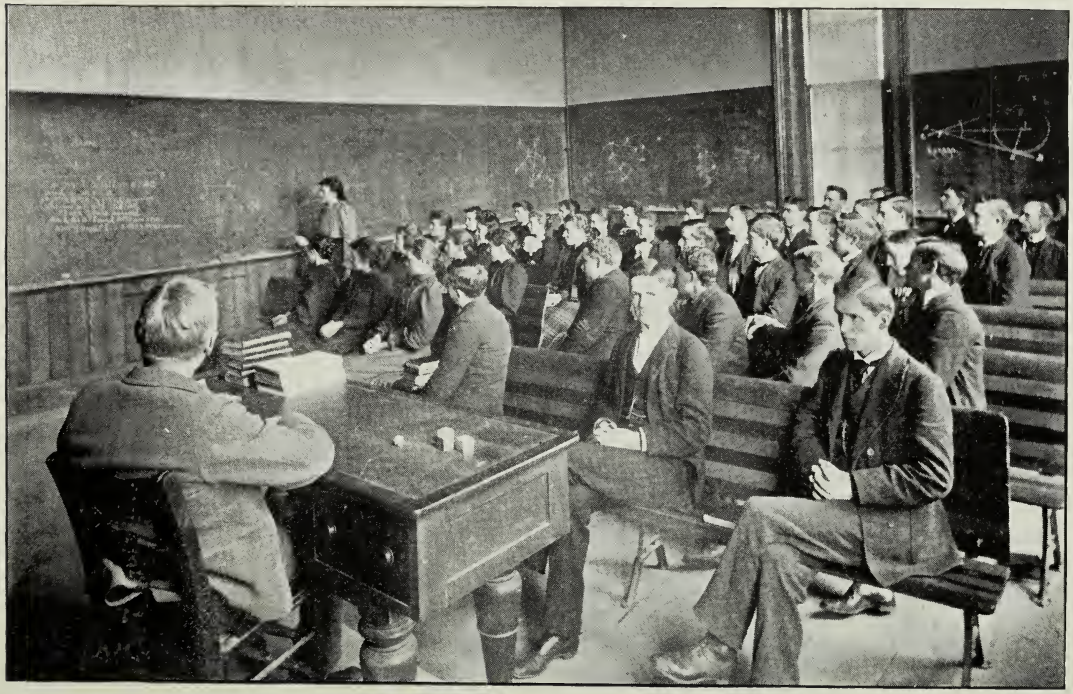
OUTLINE OF WORK IN RHETORIC.—Second Year, Second Term.

1. *Purity.*— (*a*) Good Use; (*b*) Divided Usage, Ancient Usage; (*c*) Barbarisms; (*d*) Solecisms; (*e*) Improprieties.

2. *Diction.*— (*a*) Principles of Choice; (*b*) Number of Words; (*c*) Arrangement of Words.

*Fundamental Principles* underlying rules for Purity, Clearness, Force, and Elegance.

*Kinds of Composition.*— (*a*) Description; (*b*) Narration; (*c*) Argumentative Composition.



GEOMETRY CLASS.

An effort is made to awaken the critical instinct in the hope of securing three ends: A purer diction in speech; a greater enjoyment of good English in books; and an appreciation of the fundamental qualities of good composition, unity, directness, clearness, and simplicity. Original Composition.

LITERATURE.—Second Year, Third Term, and Third Year, First and Second Term.

The work in Literature runs through three terms, one of which is given up wholly to Shakespeare. Twenty-seven weeks are left, therefore, for the study of the whole body of English literature. The history of its growth is taken up in brief outline, to give the student some notion of the relation of the literature to the historic development of the English people. The following points are treated, some of them considered at some length, some of them left with a bare mention:

1. The Saxons: Their character as seen in early literature. Beowulf, Caedmon, Cynewulf, The Fight at Maldon, Baeda, Alfred, The English Chronicle.

2. The Normans: Their origin, and character.

3. The Norman Conquest: Its Nature, its effects on Language and Literature. Two literatures on English Soil; French and Saxon, or Semi-Saxon; Chronicles; Homilies; Ormulum; Layamon's Brut; Poetic Romances; Lyrics.

4. Early Modern English. Literature of Religious and Social or Political Reform. Wiclif, Langland, Pecock.

5. Literature Proper: Gower, Chaucer, Ballads, Malory.

6. The Revival of Learning. Caxton's Work. Social, Political, and Religious Criticism. Sir Thomas Moore, Tyndale, and other controversialists and translators of the Bible, Skelton, Sir David Lyndsay.

7. Artistic Growth; the Italian Influence. Surrey and Wyatt, and the Sonnet and Blank Verse; Translations: Italian and Spanish Romances; the Tudors' love of masques, shows, and the drama; the popular taste.

8. Growth of the National Spirit. The English Reformation, political as much as religious; Struggles with Rome, Spain, France; part played by Mary of Scotland; Victory over the Spanish Armada; Drake's and Raleigh's voyages and exploits at sea; conquest and colonization.

9. The Literature of the Age of Elizabeth an outgrowth of the many-sided Life of the Time: Growth of Satire: of Political, Religious, and Social Controversy; of the Literature of Travel and Adventure; of Romantic Narrative in Prose and Poetry; of Patriotic Song and Story; of Lyric Poetry, and of the Drama, involving al the other literary forms. Gascoigne, Sackville, Nash, Spenser, Sidney, Hakluyt, Raleigh, Frobisher, Warner, Daniel, Drayton, Lyly, Green, Peele, Marlowe, Shakespeare, Bacon, Hooker.

10. The Stuarts and Puritan England; Social Demoralization; Decadence of the Drama and of the Poetic Impulse; Prose rising in importance; Rise of Biography; Growth of History; Political and Religious Controversies, continued. Ben Jonson, Beaumont and Fletcher, Webster, Thos Fuller, Jeremy Taylor, Sir Thomas Browne, Izaak Walton, William Prynne, Bacon, Knolles, Raleigh, Hall, Donne.

11. The Civil War and the Commonwealth; Political Controversy; Religious Controversy; Court and Cavalier Songs; Social Questions; History largely Biographical; Memoirs. Milton, Suckling, Herrick, Cowley, Lovelace, Bunyan, Evelyn, Clarendon, Hobbes.

12. The Restoration; Corrupt Society; Corrupt Literature; Satire; Political, Social, and Philosophical Discussions. The Dramatists: Congreve, Dryden, Wycherly, etc.; Satirists, Dryden, Butler, Pepys, Burnet, Locke, Algernon Sidney, Neville, Milton.

13. The Revolution and Age of Anne and the Georges; Prose still growing in importance as Political and Social Questions multiply; The Periodic Essay; The Newspaper; the Novel. Pope, Locke, Swift, Defoe, Gay, Prior, Warburton, Bolingbroke, Addison, Steele, Richardson, Fielding, Sterne, Smollett, Goldsmith, Dr. Johnson, Burke, Adam Smith, Scott.

14. Revival of Poetry. Cowper, Gray, Collins, Burns, Goldsmith, Crabbe, Thomson, Chatterton, Blake, Scott.

15. Period of the French Revolution; Return to Nature; Love of Man; Thought for the Poor; Reform. Wordsworth, Coleridge, Byron, Shelley, Keats.

16. Latest Period, in part a continuing of the Revolutionary Period, in part a new growth of the Scientific, Critical, and Humanitarian Impulses; History; Novels; Criticism. Tennyson, Carlyle, the Brownings, Matthew Arnold, Emerson, Hawthorne, Whittier, Lowell, Longfellow, Dr. Holmes, Bryant, Thoreau, Ruskin, George Eliot, Thackeray, Dickens, George Meredith, etc.

17. Less time is given to this historic outline than to the study of a few authors in their best works. The authors studied with some care during the last year have been: (*a*) Chaucer: The Prologue, Knight's Tale, and Nonne Prestes Tale; (*b*) Ballads: Sir Patrick Spens, Chevy Chace, Edom o' Gordon, Lyke-Wake Dirge, etc; (*c*) Spenser: Two Cantos of the Faery Queen; (*d*) Shakespeare: King Lear, Hamlet, Macbeth, Coriolanus, Midsummer Night's Dream, Othello; (*e*) Bacon: Selected Essays; (*f*) Milton: Paradise Lost, Books I–II; Lycidas; (*g*) Charles Lamb: Selections from Essays of Elia; (*h*) Thackeray: Selections from Roundabout Papers; (*i*) Robert Browning: Selected Poems; (*j*) Elizabeth Barrett Browning: Selected Poems; (*k*) Tennyson: In Memoriam.

In addition to these works, members of the class are assigned other works for private reading; essays are prepared upon works thus read, and presented before the class, and criticised.

## SHAKESPEARE.

1. Plays read: King Lear; Hamlet; Macbeth; Coriolanus; Midsummer Night's Dream; Othello.

2. Object sought: An intelligent reading of dramatic literature.

3. Points emphasized: 1. The Drama is Literature, not Philosophy, not Ethics, not History; yet, the Drama is philosophical, ethical, historical. 2 Whatever philosophical, ethical, or historical lessons the drama has to teach, these lessons are best reached through a *sympathetic study* of the drama as Literary Form. Therefore, in the first dramas read we follow closely the Dramatic Construction, observing the Induction of the action, the Development, the Climax, the Evolution, and the Catastrophe.

4. Along with Dramatic Construction, and belonging to it, we study Characterization; Dramatic Motives; Dramatic Dialogue; Soliloquy; Sequence of Scenes and Actions; Dramatic Illusion; Dramatic Time; Tragic Retribution; Differences between Tragedy and Comedy. After the class has become somewhat accustomed to following the dramatic development of an action, less close attention is paid to this in class, and we proceed at once to the characterization and motiving, and the consideration of the play as a revelation of life.

5. Lear and Hamlet are read in the class-room and discussed at greatest length. Macbeth is then studied, somewhat less closely, but with care. The others are read in private by all the members of the class; essays are then prepared by all; two or three of these essays are read in class and form the basis of a general discussion lasting two or three days for each play. In all this work, the student is urged to postpone the reading of commentators until he has studied the plays themselves, and begun, at least, to form his own judgments. Independence of opinion, and a willingness to hold the judgment in suspense and wait for further light are always encouraged.

GEOMETRY.—Second Year; Second Term, Third Term.

The course extends over two terms of twelve weeks each, and includes the ordinary High School Course in plane, solid, and spherical Geometry. Wells's Geometry is the text. About one-third of the time is devoted to original exercises. Special attention is directed to the mechanism of deductive reasoning, the earlier demonstrations being developed in complete syllogisms. The several stages of a demonstration are seen and strict conformity to the type required. Review exercises include classifications of the established truths of the science and schemes for tracing proofs to the original definitions and axioms upon which they rest. Forms of geometrical notation are discussed and considerable practice is given in brief forms of written work. Two main ends are kept in view: to equip the student with the forms of deductive reasoning, and to make the study a drill in precise thinking and accurate, perspicuous expression.

PSYCHOLOGY.—Second Year, First Term.

1. Psychology and Its Relations to the Teacher.
2. The Educational Limitations of Psychology.
3. The Treatment of Psychology adopted.
4. The Bases of Psychical Life: (*a*) Sensation. (*b*) Interest. (*c*) Impulse.
5. The Psychical Processes. (*a*) Introduction: 1. Classification of contents of our minds. 2. Classification of processes corresponding to these contents. (*b*) The Processes: 1. Non-voluntary attention. 2. Association. 3. Voluntary attention. 4. Educational principles. 5. Apperception and Retention.
6. Forms of Intellectual Development: (*a*) Principles of intellectual development. (*b*) Stages of intellectual development: 1. Training of perception. 2. Training of the memory. 3. Training of thought.
7. The Forms of Emotional Development: (*a*) Conditions of interest. (*b*) Principles of emotional growth. (*c*) The forms, or stages of emotional growth.

8. Forms of Volitional Development: (*a*) Factors of volitional development. (*b*) Stages of volitional development.

9. Mind and Body: (*a*) Importance of body for soul. (*b*) Structure of nervous system in man. (*c*) Elem ntary properties of nerve structure. (*d*) Psychological equivalents. (*e*) Localization of function. (*f*) Educational principles.

10. Summary of Principles: (*a*) Bases of instruction. (*b*) Ends of instruction. (*c*) Methods of instruction. (*d*) Relation of knowledge, feeling, and will. (*e*) Criticism of maxims.

11. The Method of Interrogation, Art of Questioning: (*a*) Introduction. (*b*) Objects of questioning: 1. Testing retention. 2. Training of apperception. (*c*) Qualifications of the questioner. (*d*) Matter and form of questions. (*e*) Matter and form of answers.

Text book: Applied Psychology. *McLellan* and *Dewey*.

PSYCHOLOGY.—(*Dewey.*)—Third Year, First 21 Weeks.

Introductory.

1. Science and Method of Psychology. (*a*) Subject matter of Psychology. (*b*) Method of Psychology: (1) Introspective; (2) Experimental; (3) Comparative; (4) Objective.

2. Mind and Modes of Activity. (*a*) Aspects of Consciousness. (*b*) Relations to each other. (*c*) Relations to the whole self.

3. Knowledge.

1. Elements of Knowledge: (*a*) Sensation in General. 1. Physical Stimulus; 2. Psychical Factor; 3. Relations of Psychical and Physical; 4. Functions of Sensation in Psychical Life. (*b*) Special Senses—Relations to Touch. 1. Touch: I. Weber's Law and Psychophysical Methods. II. Muscular Sensation. 2. Smell. 3. Taste. 4. Hearing. 5. Sight. 6. Temperature. 7. General Sensation.

2. Processes of Knowledge. (*a*) Nature of Problem. 1. Sensations and Known Objects. 2. The Knowing Self. (*b*) Apperception. 1. Problem of Apperception. 2. Kinds of Apperception. (*c*) Association: 1. Conditions. 2. Forms. I. Simultaneous or Fusion. II. Successive: By Contiguity; by Similarity. III. Function of Association. (*d*) Dissociation. 1. Relation to Association. 2. Conditions. 3. Functions in Psychical Life. (*e*) Attention 1. Attention as Selecting Activity. 2. Attention as Adjusting Activity. 3. Attention as Relating Activity. (*f*) Retention.

3. Stages of Knowledge. (*a*) Perception. 1. Of Objects. 2. Of Space. 3. Of Externality in General. (*b*) Memory 1. Definition and Problem. 2. The Memory Image. 3. Memory of Time. 4. Self as Past and Present. (*c*) Imagination. 1. Definition. 2. Ideals in Imagination. 3. Practical and Theoretical. (*d*) Thinking. 1. Definition and Division. 2. Conception; Growth of Knowledge. 3. Judgment; Belief. 4. Reasoning. I. A priori and a posteriori. II. Inductive and Deductive. 5. Systematization. (*e*) Intuition. 1. Intuition of the World. 2. Intuition of Self. 3. Intuition of God.

Text-book: Dewey's Psychology.

## PHILOSOPHY OF EDUCATION.—Third Year, Last Half.

### Scheme of Classification of the Philosophy of Education:

### Part I. Education in its General Idea.

- **A. Its Nature**
  - Possible only to self-active beings.
  - Education by Divine Providence, by experience, or by teachers.
  - Relates to body, intellect, and will; must be systematic; conducted in schools.
- **B. Its Form**
  - Self-estrangement, work and play.
  - Habit.
  - Authority, obedience, punishment.
- **C. Its Limits**
  - Subjective limit in the pupil's capacity.
  - Objective limit in the pupil's wealth and leisure.
  - Absolute limit in the pupil's completion of school work.

### Part II. Education in its Special Elements.

- **A. Physical**
  - Dietetics.
  - Gymnastics.
  - Sexual (omitted).
- **B. Intellectual**
  - Psychological epochs
    - Intuitive—sense-perception.
    - Imaginative—fancy and memory.
    - Logical.
  - Logical Order
    - Of development of the pupil.
    - Of development of the subject.
    - Of demonstration
      - Analytic.
      - Synthetic.
      - Dialectical.
  - Instruction
    - Pupil's capacity.
    - Pupil's act of learning
      - Mechanical.
      - Dynamical.
      - Assimilative.
    - Method of instruction
      - Living example.
      - Text-book.
      - Oral.
- **C. Will Training**
  - Social Usages.
  - Moral Training
    - The Virtues.
    - Discipline.
    - Character.
  - Religious Education
    - (*a*) Feeling; (*b*) Symbols; (*c*) Dogmas.
    - (*a*) Self consecration; (*b*) Ceremonies; (*c*) Reconciliation with one's lot.
    - (*a*) Family worship; (*b*) Union with church; (*c*) Religious insight.

### Part III. Education in its Particular Systems.

- **A. National**
  - Passive
    - Family—China.
    - Caste—India.
    - Monkish—Thibet.
  - Active
    - Military—Persia.
    - Priestly—Egypt.
    - Industrial—Phœnicia.
  - Individual
    - Æsthetic—Rome.
    - Practical—Greece.
    - Abstract individual—German tribes.
- **B. Theocratic—Jews.**
- **C. Humanitarian or Christian.**
  - Monkish.
  - Chivalric.
  - Citizen.
    - For special callings
      - Secular Life.
      - Jesuistic.
      - Pietistic.
    - To achieve an ideal of culture
      - Humanist.
      - Philanthropist.
    - For free citizenship.

Text-book: The Philosophy of Education—Rosenkranz.

IN THE LIBRARY.

# THE HIGH SCHOOL.

This department is especially intended to prepare pupils for college or for business life. The requirements for admission presuppose the completion of the ordinary grammar school work. The course of study is arranged with reference to admission to Harvard College. Graduates of this department are admitted without examination to the University of Illinois, the University of Michigan, Amherst, Dartmouth, Smith, Williams, Vassar, and Wellesley Colleges. The principal is a Dartmouth graduate, the first assistant a Williams graduate, and the second assistant a graduate of the North-Western University. Tuition is charged at the rate of $39 a year. Considerable freedom is permitted in the selection of studies. Students in this department are permitted to take work in the Normal Department without additional charge. Many applicants for the Normal Department cannot be received because they desire to elect their studies. This they can be permitted to do, under certain limitations, by entering the High School. The General Course gives an excellent preparation for business.

CLASSICAL COURSE.—First Class, First Term.

Latin—Harkness's Grammar, Jones's Lessons. Mathematics—Arithmetic, Normal Course. English—Analysis, Reed and Kellogg.

Second Term: Latin—Harkness's Grammar, Jones's Lessons. Geography—Guyot's. English—Composition.

Third Term: Latin—Cæsar, The Helvetian War; Composition, Collar's. History—United States. Reading—Selections.

Second Class—First Term: Latin—Cæsar, Campaign against Ariovistus, The Belgian Confederacy; Composition, Collars. Greek—Goodwin's Grammar, White's Lessons. Zoology—Colton's.

Second Term: Latin—Cæsar, Books III. and IV.; Composition, Collar's. Greek—Grammar, Reader or Anabasis. History—Ancient History. English—Rhetoric, Hill's.

Third Term: Latin—Sallust's Catiline; Composition, Collar's. Greek—Anabasis or Hellenica; Composition. Mathematics—Algebra, Wentworth's.

Junior Class—First Term: Latin—Cicero, Orations against Catiline; Sight Reading; Composition, Collar's. Greek—Anabasis or Hellenica; Sight Reading, Kendrick's Selections; Composition. Mathematics—Algebra, Wentworth's.

Second Term: Latin—Cicero, Four Orations, including the Manilian Law; Sight Reading; Composition, Collar's. Greek—Hellenica and Plato, Goodwin's Selections; Sight Reading; Composition. History—Old Greek Life, Mahaffy's. Mathematics—Plane Geometry, Wells's.

Third Term: Latin—Ovid; Lincoln's Selections; Sight Reading, Ovid; Composition, Collar's. Greek—Herodotus, Goodwin's Selections; Composition. History—Pennell's Ancient Rome. Mathematics, Solid Geometry, Wells's.

Senior Class—First Term: Latin—Vergil, Books I-IV.; Sight Reading, Vergil. German—Comfort's German Course. Physics—Avery's.

Second Term: Latin—Vergil, Books V-VI.; The Eclogues. German—Comfort's German Course; Selections from Whitney's Texts. Physics—Avery's. Physiology—Martin's Human Body (but one required). Reading and Themes—Selections from Shakespeare.

Third Term: Greek—Iliad, Books I-III. *German—Selections from Whitney's Texts. Political Economy—Walker's.

GENERAL COURSE.—First Class, First Term.

Latin—Harkness's Grammar, Jones's Lessons. Mathematics—Arithmetic, Normal Course. English—Analysis, Reed and Kellogg.

Second Term: Latin—Harkness's Grammar, Jones's Lessons. Geography—Guyot's. English—Composition.

Third Term: Latin—Cæsar, the Helvetian War; Composition, Collar's. History—United States. Reading—Selections.

Second Class, First Term: Latin—Cæsar, Campaign against Ariovistus; The Belgian Confederacy; Composition, Collar's. Drawing—Prang's series. Zoology—Colton's.

Second Term: Latin—Cæsar, Books III. and IV; Composition, Collar's. History—Ancient History. English—Rhetoric, Hill's.

Third Term: Latin—Sallust's Catiline; Composition, Collar's. English—Criticism. Mathematics—Algebra, Wentworth's.

Junior Class, First Term: Latin—Cicero, Orations against Catiline; Sight Reading; Composition, Collar's. English—English Literature. Mathematics—Algebra, Wentworth's.

Second Term: Latin—Cicero, Four Orations, including the Manilian Law; Sight Reading; Composition, Collar's. Physiology—Martin's Human Body. Mathematics—Plane Geometry, Wells's.

Third Term: Latin—Ovid, Lincoln's Selections; Sight Reading, Ovid; Composition, Collar's. History—Pennell's Ancient Rome. Botany—Gray's. Mathematics—Solid Geometry, Wells's.

Senior Class, First Term: Latin—Vergil, Books I-IV.; Sight Reading, Vergil. German—Comfort's German Course. Civics—United States and Illinois, Andrews's. Physics—Avery's.

Second Term: Latin—Vergil, Books V-VI.; The Eclogues. German—Comfort's German Course; Selections from Whitney's Texts. Reading and Themes—Selections from Shakespeare. Physics—Avery's.

Third Term: German—Selections from Whitney's Texts. Physical Geography—Guyot's Earth and Man. Political Economy—Walker's. Chemistry—Avery's.

*An additional year in German is optional.

## THE GRAMMAR SCHOOL.

The Grammar School is intended for those who wish to prepare for the Normal or High School, or for general business.

Young men and women not fully prepared for the Normal Department are enabled to enter after spending a term or two in the rigorous preparatory drill of the Grammar School; while, to those who are pre-

paring for the High School, it offers excellent academic training. It is in the direct charge of a Principal, and his assistant teachers are under the constant supervision of the Principal Training Teacher.

Pupils often fail in their effort to get a higher education, simply because their elementary education has been poor; hence, great care is taken that each shall be well grounded in elementary knowledge.

Those who wish merely a common-school education will find the course comprehensive enough for all ordinary business purposes. Much care is taken that pupils shall become good penmen, and that they shall acquire a ready knowledge of arithmetic, in order that they may make good accountants. Those more advanced will have the opportunity of studying bookkeeping, taught according to the most practical methods.

The grading is such that pupils may take the work which they are best fitted to do; and, during the second year, those who may wisely do so are allowed to take any of the languages in the High School.

The moral influence of the school and its surroundings is good. Vicious boys who are outcasts from other schools will not find admittance here. Saloons and other places of evil resort are not allowed in the town. Tuition is charged at the rate of $25 a year.

## THE INTERMEDIATE AND PRIMARY SCHOOLS.

The Intermediate and Primary Grades occupy four rooms on the first floor of the Training School building. Tuition is charged at the rate of $15 a year in the Intermediate grades. No tuition charge is made in the Primary grades.

## PLANS FOR TEACHING.

The following "Plans for Teaching," prepared by a member of the senior class, will illustrate the work done on this line. These are followed closely in the instruction of a class in the Model School. Before they are put into operation they must receive the approval of the training teacher in charge of the work.

### SCIENCE TEACHING.

#### PLANS FOR TEACHING THE OX.

*General Plan.*—The aim of this work is to excite an interest in this animal, and to create a study of the adaptation of the organs for the functions performed by them; moreover, a study of the animal as to its value in nature. It is not the purpose to start with a classification, but many points are to be indicated which will distinguish the ox from some animals and identify it with others. Inasmuch as the child's mind looks for the "why" of things, great stress in all the work is put on causal relations. No attempt is to be made to point out only the wonderful or the great body of facts that might be learned, but they are to be taught largely by their own experience or by direct investigation. It is intended that they shall have an ever widening interest in

very common things. Aside from the value of such study for awakening interest, it is possible, by the study of a type of ruminants, for the child to find himself possessed of the knowledge necessary to form that group when it shall appear in later work. In presenting the subject in order to aid the child in grasping the points and in reproducing the subject after it is developed, the following topics are to be used: 1. A ruminant. Why chew a cud? When? 2. How the ox bites off grass. The teeth. 3. The head and nose. How adapted for use. 4. The tongue, and how the ox eats mush. 5. The stomach. Trace the passage of food. 6. Horns, and their uses, (*a*) to the animal, (*b*) to man. Eyes. 7. Hoofs, hide, hair, and their uses. 8. Bones. Uses. What is made of them? 9. Parts used for food. Dairy products. 10. Relatives of the ox. Uses. The work is to be divided into five lessons and the subject matter indicated by the outline is to be unified further in the statement of aims.

FIRST LESSON.

*Aim.*—We will learn about an animal that chews a cud.

*Preparation.*—(Have a section drawing of the four parts of the stomach of an ox showing the passages for food.) Name some animals that chew a cud (cow, sheep, and possibly the camel or deer will be given.) The cow and ox are what we shall study. What does the ox eat? Does he chew his food? The ox is a very common animal but it is peculiar in that it chews a cud. What is meant by chewing a cud? Is it different from other chewing? (Find out all that is known about the process.)

*Presentation* —The coarse food passes quickly from the mouth into No. 1, and is there soaked and passed into No. 2 and from there back through the gullet in little wads into the mouth. There it is chewed very thoroughly and again swallowed. This time it passes into stomach No. 3, and from there it is squeezed into No. 4, where most of the digestion takes place. (Have a pupil recite.) Is there anything strange about this? Any question. (Possibly there will be an important question.) Well, I will ask you: How do you think the food falls into No. 1, the first time it is swallowed, and into No. 3, when it is swallowed the second time. (Try a few answers.) I will show you: Here is a rubber tube with a slit near the end. If I put a large pea through the tube, where will it come out? (Through the slit.) If now I put a very small pea through, it does not stop at the slit but goes on through. Can you now answer the question about the stomach? Repeat the question. Answer. (Try several.) Another question: How is the food squeezed out of No. 1 into No. 2, and from No. 2 into No. 3? How does the food get into No. 4? How are these muscles arranged? (Show by a ready free-hand drawing.) How does the ox get his cud up to his mouth and back again? (Show again with the tube.) There are muscles around the gullet as are my fingers around this tube. If the ox wishes to belch up the food you see he will shorten those behind the wad and thus press it along.

SECOND LESSON.

*Aim.*—We want to know more about this cud making and cud chewing machinery.

*Preparation.*—(Have the stomachs of an ox present and show clearly to all each of the four parts.) Here is the paunch. Notice what a large sack it is. See these muscles in the walls. We will cut into this

PUPIL TEACHER AND CLASS.

paunch. See these dark hair things. What are they for? Well, the food is borne into — No. 2. Here it is. We'll cut it open. Ah, what does this look like? (Like honey-comb.) Yes, and so this stomach is called a honey-comb stomach. In this honey-comb the cuds are fitted for chewing. How is the cud carried to the mouth? (By action of muscles.) Let us find these muscles. Where does the food go next? (In stomach No. 3.) Here it is. It is large and round and is called the leaflet. Let us cut into it. Do you see these leaves or folds? This stomach is sometimes called the many ply. Do you see why? (Many folds.) The food next goes into No. 4, this long stomach called the rennet. Do you know what the walls of this stomach are used for? (In making cheese.) Here the food is digested the most. An animal with such an apparatus as this is called a ruminant, because it ruminates or chews its cud. I will write that word. 1. A ruminant. Why does it chew? When? (Have a pupil recite.)

*Presentation.*—What kind of teeth are necessary for chewing? (Blunt teeth.) How does the ox bite off grass? (Nose out.) What teeth, then, do you think are wanting? (Upper front teeth.) How is the head adapted for grazing? (Long nose.) Describe the tip of the nose. (Tough, without hair, and covered with sweat.) I will write another topic. (Pupils recite.) 2. How the ox bites off grass. The teeth. 3. The head and nose. How adapted for use. (Recite.) How does the ox use his tongue? How differ from a cat's tongue? How does the ox swallow? How drink? How eat mush? 4. The tongue, and how an ox eats mush. (Recite.) 5. The stomach. Trace the food.

THIRD LESSON.

*Aim.*—Let us study the ox's means of protection, defense, and safety.

*Preparation.*—How does the ox defend himself? (By hooking, kicking, stamping, running, etc.) What is their clothing? (Hide and hair.) Their language? (Bellowing.)

*Presentation.*—What does the animal use in hooking? (Horns.) What are horns? How grow? Rings. Use to the animal? (To get food for itself.) Injury to fatting cattle? Tell of dehorning. Uses of horn to man? (Powder horns, buttons, handles, and ornaments.) Recite on this topic. 6. Horns and their uses (1) to the animal, (2) to man. What is the organ of sight? What color? (Brown.) With what does the animal kick? What is peculiar about the feet? (Cloven hoofed.) How many toes? (Four.) How does the animal walk? (On his toes.) Of what use are hoofs to the animal? To man? (Glue and neat's foot oil.) (Recite.) Topic 7. Hoofs, hide, and hair, and their uses. (Let several recite.) How is leather tanned?

FOURTH LESSON.

*Aim.*—Let us study more of the uses of this animal.

*Preparation.*—What have you noticed on signs? (Beef, hides, horns, and tallow.) Where is beef prepared? (Slaughter house.) What is done with hides? (Sent to a tannery.)

*Presentation.*—Where is beef sold? (Butcher shop.) What kinds of beef are there? (Steak, veal, tongue, roast, etc.) Where is steak found? What is veal? What is tallow used for? (Candles, oiling.)

What is tripe? (Walls of the stomach.) Who of you like liver? Who, tongue? Who, heart? (Recite.) Parts used for food. What are dairy products? (Milk, butter, and cheese.) Where are there great dairies? (Elgin, New York state, etc.) Tell about a creamery, a cheese factory, and Jersey cream. (Recite.)

FIFTH LESSON.

*Aim.*—We will study some of the relatives of the ox and their value.

*Preparation.*—(Show a number of pictures of animals of this family, and related animals.) Name some.

*Presentation.*—There are wild cattle now in North and South America, but they are not native here. The Spanish brought the ox and cow over with them Great herds have gone wild since. There is also a wild animal much like the ox. What is it? (Bison.) It has been hunted so much that it has nearly disappeared. Describe a bison. (Reproduce about the bison.) (Show the buffalo pictures.) Here are some strange animals—the zebu, the yak, and the gnu. These are used in India. The zebu resembles an ox with a hump on his back; the yak resembles the goat; and the gnu resembles a horse, a buffalo, and a deer in appearance and action. (Reproduce.) The deer is an interesting animal. It is generally wild. The body is not much larger than a sheep, but it has longer legs, and larger, bony horns. There are many kinds of deer. The reindeer is a large variety, and is of great use to the people of the Arctic countries. Can you tell me of how much use? (Tell of deer.) The elk and the moose are allies to the ox; so also the chamois and the ibex. Tell what you can of these.

*Comparison.*—Which is of more value, the ox or the sheep? Why? Which is of more value, the sheep or the goat? Why? These are all animals related to the ox. Let us compare the ox with the horse. Which is more valuable, the horse or the cow? (Let several take part until there is much enthusiasm.) Review by topics and let us see how clearly we can talk on each topic. Some time will be spent in drawing the stomach of an ox, both outside and inside views.

J. A. DIXON.

## CRITICISMS UPON WORK OF PUPIL-TEACHERS.

As has been stated, each pupil-teacher is generally observed by one or more Normal students. These critics report their criticisms to the training teachers. The following "Report of Observation" illustrates the work attempted in this direction:

REPORT OF OBSERVATION IN MODEL SCHOOL.

Tuesday morning, April 4, I was directed to observe work done in the lower seventh Geography class, taught by Miss M.

Miss M. and the class were strangers to each other, and the presence of an observer at this time may have made Miss M.'s position somewhat more trying, yet it was an excellent opportunity for the exhibition of self-control and class government on the part of the teacher. The first few days seem to decide largely the character of the school and whether the pupils are to rule or to be ruled. In going before the class as a new teacher, Miss M. could be no more than what she simply *is*, and her real status was very soon an evident fact to the class. The genius of self-control and of the control of others may be more natural

to some than to others, yet each is a thing in which we may not be so well accomplished that we may not improve. Miss M. was further embarrassed by an error in the assigning of the lesson, for which, however, she was not responsible. She had prepared a lesson on the Rhine River, and the class had partly prepared a lesson on Illinois. Under the circumstances she did very well, but many of her questions were pointless, owing to lack of self command.

In the ensuing lessons which Miss M. assigned there could be noticed a certain logical proceeding in the investigation of topics, which suggested an outline in the mind of the teacher. In this respect the work, as work, was very good. Barring a few errors of omission and commission, noted further on, I would not report unfavorably on Miss M.'s instruction, though it may be considerably improved, but will pass on to some account of her government. First, however, I wish to record a dissenting opinion as to the content of the work. I do not think the minutiæ of the work done on the Rhine profitable to the pupils. Granting that the Rhine is an historic river, I do not see that we, as Americans, need to pay special homage to it. Considering the wide field of geographical knowledge, there are certainly other greater facts than the minutiæ of the twists, crooks, turns to the N. E., N. W., N. N. W., the particular width of the river at one portion of its course, where "flat boats and rafts sail along" it. So much for my individual dissent.

Miss M. would exhibit more tact if she would have all members of the class responsibly busy with the lesson. There would then be considerably less of the appearance of government required, and her positive, aggressive, self-assertive *I* would not be so noticeable and so objectionable. "*I* want you to do this," "*I* will have that," "*I* will not have so much noise," etc. This implies a threat and suggests the absence of the power necessary to enforce the thing stated. It begets a pupil's antagonism, it seems to me. There should be no doubt about misconduct and its consequences, and there should be very little said about it, The commands, "Keep still," "Remember;" the statements, "When we get quiet we will go on, and not before," "I will not have noise," suggest that each pupil should be so busy that there would be no time for unnecessary noise. The teacher would do well to commit herself to but few statements, and then adhere to those few. The noise continued. The next who "spoke out" was to be sent from the room to return and recite at 3 o'clock, but was not sent. In these ways control is soon lost. The training teacher's entrance at one of these stormy periods was like oil on troubled waters.

Although we are dealing with Young America, to whom, as an integral part of his experience, the rationale of all things has been explained, I do not think it especially necessary for the teacher to explain her reasons, aims, wishes, intentions, etc., which pertain simply and solely to the teacher as teacher. If the teacher sees fit to do certain things in certain ways let them be done in those ways and no questions asked. This is the practice of despotism, and is directly opposed to democratic American ideas of "why and wherefore." The despotic method was and is proper for those who were and are incapable of proper self-control, or, I may say, self-directing. Common school, and most graded school pupils are included in this list.

Some of the specific things which I would criticise are the loud voices of some of the pupils, and occasionally of the teacher. This latter was intended probably to "rise to the exigencies of the occasion."

Illinois was pronounced Illinoiz. The arsenal at Springfield, Mass., was described and allowed to pass as at Springfield, Ill. A boy pointing to his sketch said, "This is the Rhine River." "How many of you noticed how crooked the Rhine *was?*" "Lake Constance is the Rhine enlarged." "Do like I do," "Say it like I do," or usage to that effect.

Misspelled words could be more easily and advantageously corrected than by having one pupil spell his entire list while the rest do nothing, even if they are expected to be paying attention. The teacher should not spend too much time erasing pupils' work for them. It is better that they learn to do it for themselves, as it is a meritorious habit to look after one's own trash in such matters.

The present class is one which, it seems to me, might prove interesting to work with. They have some lessons in politeness yet to learn, yet in the main they seem to be very teachable.

J. A. STRONG, Second Year.

## MODEL SCHOOL.—OUTLINE OF COURSE OF STUDY.

### FIRST PRIMARY DEPARTMENT.

Ages of Children, 6 to 7 years.

Literature. Thirteen Fairy Tales. These are told by the teacher and reproduced by the children.

Science. First Term, Fall.—Wild rose; pig; dog, fox, wolf, and bear; preparation of trees for winter; autumn leaves and buds found in their axils; nuts; peaches; plums; pears; grapes; migration of robins and blackbirds; birds that remain with us—the sparrow, owl, and crow; snow birds and chickadees.

Science. Second Term, Winter.—Evergreen Trees—pines, spruces, cedars, and firs (cones collected in the fall); horse, donkey; mouse, rat, rabbit, and squirrel; hen, turkey, and pigeon; return of birds—bluebird, bluejay, and robin.

Science. Third Term, Spring.—Germination of seeds—lima beans, peas, corn, and morning-glory; trees—soft maple, elm, and larch; flowers—cherry, violet, tulip, marsh marigold, daisy and buttercup; birds—wren, meadow-lark, swallow, catbird, cowbird, woodpecker, and blackbird.

Reading. The Literature and Science Work is made the basis of the early reading. Harper's First Reader. Cyr's Primer. Stickney's First Reader. Todd and Powell's First Reader.

Phonics and Word Building. All consonant sounds and the long and short vowels. New words built from familiar words found in the reading lesson.

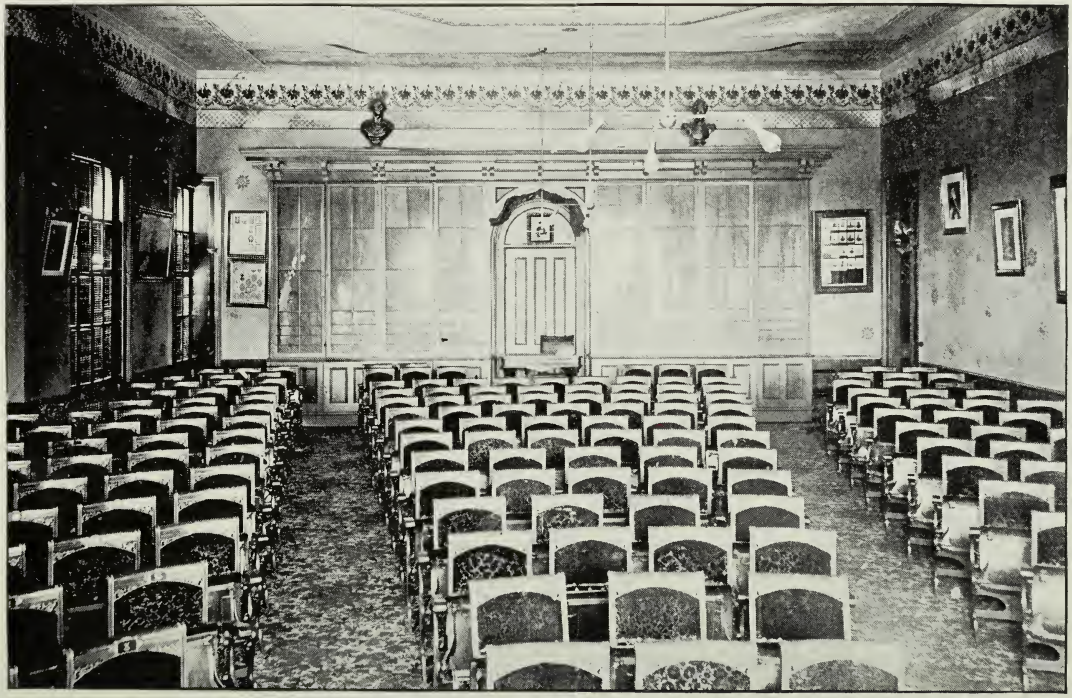
Spelling. Spelling by sound of words le rned in reading. The same words written in little books made for the purpose.

Written Language. Writing of stories derived from literature and science studies.

Number. Combinations through *10* learned. Tables of weights and measures, the measuring number not to exceed *10*.

Writing. Correct formation of all small letters, with proper combination of same into familiar words. Writing of names of children.

Drawing, Molding, and Sewing. Based on stories learned in literature, and objects studied in science.



PHILADELPHIAN SOCIETY HALL.

Color Work. 1. Cutting and pasting of fruits and vegetables studied in science. 2. Cutting and pasting of circles, squares, and triangles, forming borders and rosettes.

General Exercises. 1. Songs and poems suitable for the season or occasion. 2. Marches and games. 3. Stories read to the children from the Kindergartens, Vols. I.–IV., Sara Wiltse's Kindergarten Stories, or longer stories than are found here, *e. g.*, Little Lord Fauntleroy or Little Lame Prince.

OPENING EXERCISES.

1. A passage of scripture suggested by the season or state of the weather; one connected in thought with the science study, or one containing a helpful moral truth.

2. A morning prayer, sung with bowed heads.

3. A song or poem bearing on the scripture passage quoted, or any bright morning song.

4. One or two minutes given to observations made by the children, as the first appearance of the bluebird or robin, the birds' nest building, the development of the buds on the trees, early flowers. etc.

LITERATURE.—First Term, Fall.

*Material.*—The Old Woman and Her Pig. The Three Bears. The Anxious Leaf. The Spruce Tree. The Chestnut Boy. The Christ Child and St. Antonio. Stories of Thanksgiving and Christmas. Poems of the leaves, nutting time, the frost, and Christmas.

Second Term, Winter.

The Fir Tree. The Little Match Seller. The Street Musicians. Nothing but Leaves. The Lion and the Mouse. Stories of Lincoln, Longfellow, and Washington. Poems of sun, moon, and stars; of frost and snow. Poems, "Little Fir Tree" and "March Wind," also "The Wind."

Third Term, Spring.

Little Red Riding Hood. The King of the Birds. The Story of the Morning-Glory Seed. The Pea Blossom. The Rainbow Fairies. The Discontented Pine Tree. Stories told about Decoration Day, and Fourth of July. May Day celebrated. Poems of birds, trees, and flowers. Bayard Taylor's "Night with a Wolf."

*Purpose*, in teaching Fairy Stories.

1. "They contain a moral educative power not elsewhere found," leading the child to form judgments of right and wrong, good and evil.

2. "They prepare the child's mind for ideas." "The many scenes they reproduce, the ideas they call back, and the feelings they stir up, are the most fruitful ground for the seed corn of instruction."

3. They elevate the imagination.

4. They are classical, and develop in the child a taste for good literature.

*Method.*—The following method for teaching Little Red Riding Hood (see collection of fairy stories in primary exhibit) will illustrate the method used in teaching all the Fairy Stories:

*Aim* for whole story: I will tell you a story about a little girl that got into trouble by stopping to talk with a stranger when sent on an errand.

*Preparation.*—You may tell me when she meets the stranger. Perhaps you won't know that he is a stranger. We'll see. I want you to tell me something first about a person who is no stranger to you—*your grandmother.* Then follows a pleasant chat with the children about their grandmothers—the kind things grandmother does for each, and the ways they have of showing their love to her, the visits they make her, etc. This little girl who met a stranger had a grandmother who was very kind to her, and whom the little girl liked to make happy.

*Presentation.*—Relate Sec. I. (To, "As she was going.") Children reproduce Section II. (To, "She stopped often.")

What is this story about? (The children state the aim of the whole story given the day before.) We will see if she meets the stranger to-day. Relate first sentence. A hand comes up, another, and another, and great excitement prevails. What is it, Stuart? "The wolf is the stranger." Are you afraid to have her meet him? Why? He did have a great mind to eat her up, but did not dare. Why not? Relate remainder of Sec. II. Have reproduced Section III. (To "By-and-by.")

What is our story about? Has she met the stranger? Where was he when we left him? Where was the little girl? Is she in trouble yet? (referring to aim) We shall see if she stays out all day to-day. What would the little girl be likely to see here in the woods? Relate first sentence. Where is the wolf? Relate remainder of Sec. III. Children relate the whole story as far as learned. Section IV. (Remainder of story.)

What is our story about? Aim related. Was she in trouble when we left her? We will see if she is happy to-day. Relate first sentence, the children tapping lightly on their desks to represent Red Riding Hood's knock. Who is in this room? Relate second sentence. What might little Red Riding Hood think when she heard this voice? Relate remainder of Sec. IV. Children reproduce the entire story.

Now you may take these pencils and drawing paper. Ethel, Louise, and Mary may picture Red Riding Hood meeting the wolf. Ray, Morris, Lena, Ruth, and Clara may picture the wolf in grandmother's house. Charlie, Arthur, and Miller may picture Red Riding Hood at grandmother's door.

## SCIENCE.

*Material.*—The Science work, so far as possible, is based on the Literature. Each season also furnishes a bountiful supply.

### First Term, Fall.

Wild rose; pig; dog (as typical of its class), fox, wolf, and bear; preparation of trees for winter—autumn leaves and buds found in their axils; nuts; peaches, plums; pears; grapes; migration of the robins and blackbirds; birds that remain with us, viz.: the sparrow, owl, and crow; snowbirds and chickadees.

### Second Term, Winter.

Evergreen trees—pines, spruces, cedars, and firs. (Cones collected in the fall); horse (as typical); donkey; cat, lion; mouse (typical), rat, rabbit, and squirrel; hen (typical), turkey, and pigeon. Return of birds—bluejay, bluebirds, robin.

### Third Term, Spring.

Germination of seeds—lima beans, peas, corn, and morning-glory; trees—soft maple, elm, and larch, also cherry; flowers—violet, tulip, marsh marigold, daisy, and buttercup; birds—wren, meadow-lark, swallow, catbird, cowbird, blackbird, and woodpecker.

## SCIENCE.

*Purpose.*—1. To make the children more observant. 2. To increase their self-reliance. 3. To lead the children to *think*. 4. To give them greater intelligence. 5. To increase their usefulness.

*Method.*—Choose at first some familiar animal or plant typical of a class. 1. Ask the children to tell all they know about the object before taking it before the class. Quite likely some may think that they know all about it. The effect of such a beginning is to make the children doubtful about many things which they thoughtlessly supposed they knew. They then become more attentive, for they are anxious to learn when they find that there are things which they do not know. 2. Much depends on the proper statement of an aim. It should be so stated as to appeal strongly to the child's reasoning power. His feelings should be touched so that he responds in a manner similar to this: "Let us go to work, I believe we can find that out." Thus in studying the trees in the fall, this aim is stated: "Let us see if we can find out why the leaves do not stay on all winter." As soon as this aim is stated the child, finding a problem to work, begins on it at once. The reason that children do not think more is because we give them nothing to stimulate thought. 3. The study is so guided that one point leads to the next, logically, and at the end of the study the child can make a connected story about it, covering all the points studied. 4. *Function* is largely dealt with in this study as suggested by the aim. "Why has the cat sharp claws?" rather than "How many claws has the cat?" 5. Perfect freedom of expression is allowed the child. He may say "baby plant" instead of embryos. It means much more to him. 6. This being the imaginative period of the child's life, he is not only *allowed* but *encouraged* to dress the plants and animals in clothing woven by his fancy. "The dandelion's hair is yellow, but when it gets old its hair turns gray. Here are some that are bald, too." 7. A feeling of kinship to animals and plants is encouraged. Children are led to regard them with a tender feeling akin to love.

## READING.

*Material.*—Stories derived from the literature and science work are made the basis for the early reading. Harper's First Reader. Cyr's Primer. Todd & Powell's First Reader. Stickney's First Reader.

*Purpose* in using the science and literature stories as the basis for the early reading. Before the child can become a good reader there are a large number of *forms*—words, which he must master. This learning of forms is new business to the child, and unless it can be made attractive, is a severe tax, causing the child to tire of school life. The child is a thoughtful being, and likes to give expression to his thoughts. We take advantage of this and make thoughts—the child's own thoughts—a covering for these forms. In this dress he masters

them with pleasure and little fatigue. In the fore part of none of the First Readers are found really *interesting* thoughts. This part we bridge over by the aid of the Science and Literature.

*Method.*—1. A classified list is made of all the words in the fore-part of the reader we wish to use—this part which we wish to bridge over.

2. The teacher wishes to put her questions to the reading class in such a manner as to necessitate their use of these words. That is not a very hard task. For example, the class in Science have been studying the toad. The teacher wishes to develop a set of sentences taken from their study of the toad. She asks: "What did you see this morning in a cup, John?" John replies, "I saw some eggs in a cup." (These words all are found in Harper's First Reader.) "We will let the chalk say what John said." (Teacher writes the story at the board.) As soon as all know this story as a whole, the teacher asks, "Were they hens' eggs?" What then? "They were toads' eggs." This is taught as a whole and the first sentence reviewed. These sentences are followed by others, developed by questioning the children. The eggs are round. They are in a long string. A baby toad came from an egg. It swims as a fish swims. (With the exception of *toad* these words are all in Harper's Readers.) They now know the sentences. Taking the first sentence, the words are learned from it by their position in the sentence.

3. These words are placed in columns and learned by reference to like ones in position in the sentence. Then the child masters the word so that he call it without reference the sentence.

4. The words learned are placed in new connections, forming new sentences. They get the thought from these and express it—begin to read independently.

## PHONICS AND WORD BUILDING.

*Material.*—1. The consonant sounds and the long and short vowels. 2. Known words from which new words are formed.

*Purpose.*—To enable the child to master words by himself and become an independent reader.

*Method.*—The teacher, for a number of days before beginning the phonic work, breaks some of the simple words into their component parts by speaking them very slowly. The children begin to see that a word, as well as a sentence, "falls apart." Taking the word *cup* from the first sentence the children are taught the sounds, c - u - p. Other words that they have learned are also broken up in the same way and the sounds taught. Then from these sounds new words are constructed, always using a known word for the basis; *e.g* , the word *fish*, in the last sentence given by the children, is decapitated and only *ish* remains: *d* is written on the board and sounded, then moved up in front of *ish*. We now have *d-ish* or *dish*. *W-ish* gives wish.

## SPELLING.

The children spell by sound the words learned in Reading. Afterward these same words are written by them in the little books made for the purpose.


SCIENCE CLASS.

## WRITTEN LANGUAGE.

*Material.*—Sentences derived from the Literature and Science.

*Purpose.*—1. To help the children to a free expression of their thoughts in writing. 2. To teach the use of capital letters at the beginning of sentences and in proper nouns; the use of the period and question mark at the close of a sentence; indentation, and proper margins.

*Method.*—The teacher writes out a short, connected story, similar to the one in Reading, given above, in which the words are all familiar to the child. She asks a question and develops the first sentence. These sentences are previously written by her on spaced manilla paper. Now each child being provided with a sentence, pen, and paper, writes the story on practice paper or in Bond's Staff Ruled Copy Book, No. 3. For the first few weeks these copies are put on the board and the child copies them there. Later, no spacing is necessary.

## NUMBER.

*Additions* of numbers, sums not to exceed ten; *Subtractions*, minuend no greater than ten; *Products*, up to ten; *Division*, the dividend not greater than ten. All *fractional parts* of the digital numbers, providing these parts be integers. Tables of weights and measures, no greater measuring number than ten. A great proportion of this work is done with objects, but before the end of the year, they recite the tables without objects and know combinations thoroughly. To test them in this respect charts are made.

## DRAWING, MOLDING, AND SEWING.

*Material.*—Objects and stories taken from the Literature and Science.

*Purpose.*—1. To teach the children to express their thoughts in other ways than through either spoken or written language. 2. To make them more observant. 3. To lead to greater accuracy in copying from objects. 4. To develop habits of neatness. 5. To render the fingers skillful, as in manipulating the clay.

*Method.*—1. In the Literature Class the children draw the stories they study, without any interference on the part of the teacher. In the Drawing Class, good pictures of what the children tried to express, are placed on the board by the teacher, and they are helped to a better expression of what was in their minds. In Sewing, the children are led to draw their pictures, prick them, then sew, independent of help. In the sewing exhibited the pictures were drawn by the teacher. The children did the pricking and sewing. In Molding, the children have an object before them, as an orange, which they imitate as closely as possible in shape and markings. 2. Moldings of forms based on sphere, cube, oblong, square and triangular prism, and hemisphere.

## COLOR WORK.

*Material.*—1. Representations in colored papers of fruits and vegetables studied in science. 2. Circles, squares, and triangles of colored papers to be made into borders and rosettes.

*Purpose.*—1. To teach children to recognize the primary and secondary colors. 2. To make pleasing combinations in color and form.

*Method.*—1. For fruit work.—The child is seated at a table and given a lemon. He represents it on manilla paper. When he has a good pattern of it drawn, he cuts it from the paper and takes his lemon to the box of colored papers, where he matches it in color. Then he lays his pattern on the wrong side of this, marks it out, and afterward cuts it out. Next he pastes it on a square or rectangular piece of cardboard. 2. The child is provided with circles, squares, or triangles in colored paper and told to make them into a pretty border. If the design is a good one, he is allowed to paste it. If he shows a lack of good taste, the teacher suggests changes, and the child produces a better border. The rosettes are laid in the same way. Originality in design is encouraged.

### GENERAL EXERCISES.

1. Songs and poems appropriate to the season and occasion. (See list of songs and collections of poems in exhibit.)

2. Marches and games.

3. Stories from Kindergartens, Vols. I., II., III., and IV., and Sara Wiltse's "Kindergarten Stories," read to the children. Sometimes a long story is read, a little being given each day; *e. g.*, "Little Lord Fauntleroy," or "Little Lame Prince."

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## WORK FOR THE SECOND YEAR.

See "Outline of Second Grade Work" in Primary Exhibit.

*Opening Exercises.*—Brief devotional exercises, consisting of the Lord's Prayer, Beatitudes, selected Psalms, verses suited to the seasons, and songs.

*General Exercises.*—Tales, stories, poems, and songs, suited to the season, and in connection with other subjects. Songs, games, marching, and calisthenics.

### LITERATURE.

*First Term.*—Seven Little Sisters; Christmas Stories; Thanksgiving Stories; Poems for Fall Flowers.

*Second Term.*—Each and All; Poems from Longfellow; Story of Lincoln; Myths from Hiawatha; Story of Washington; Moon Stories.

*Third Term.*—First half of Robinson Crusoe; Poems of Spring, Flowers, and Birds.

### SCIENCE.

*First Term.*—Cocoanut, Bamboo, Rice, Tea, Silkworm, Bee, Ant, Monkey, Parrot, Camel, Ostrich, Chamois, Squirrel, Reindeer, Polar Bear.

*Second Term.*—Seal, Whale, Owl, Frost, Snow, Rain, Hail, Willow, Lilac, Peach Buds.

*Third Term.*—Germination of Bean, Squash, Sweet Pea, Norway Maple, Box Elder, Balm of Gilead, Violet, Buttercup, Spring Beauty, Dandelion, Thrush, Oriole, Blue Jay. (All material for the year is taken from the Literature, or furnished by the season.)

### READING.

*First Term.*—Barnes' Second Reader. For supplementary, Parker's Second.

*Second Term.*—Stickney's Second. Easy Steps, for supplementary.

*Third Term.*—Harper's Second. Supplementary, Nature Stories by Bass or Todd, and Powell's Second.

### NUMBER.

Combinations to 30; Additions and Subtractions to 100; Roman Numerals to 30. Begin Cropsey's Elementary Arithmetic; Addition and Subtraction.

### WRITING.

Capital letters and a review of the small letters. Penholding and Position.

### SPELLING.

Written Spelling each day; Words taken from the Reading or other studies.

### PHONICS.

Word-building continued; New words in the Reading spelled by sound; Making of long and short vowels.

### WRITTEN LANGUAGE.

Short compositions written upon the subjects studied in Literature or Science.

### DRAWING.

*Form Study.*—Review sphere, cube, cylinder, hemisphere, and prisms; study ellipsoid, ovoid, and vase forms. *Clay.*—Model objects based on the forms studied; also objects in connection with other subjects. *Drawing.*—Draw objects studied in connection with Drawing and other subjects. *Color.*—Water colors used in painting fruits and flowers; colored papers for simple rosettes and crosses.

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## Work for the Third Year.

For more definite work, see "Outlines for Third Grade" in Primary Exhibit.

*Opening Exercises.*—Brief devotional exercises, consisting of verses from the bible appropriate to the season, hymns, prayers in song and verse, and morning songs.

*General Exercises.*—Talks, stories, poems, and songs suited to the season or other work, Marches, games, and calisthenics.

## LITERATURE.

*First Term.*—Complete Robinson Crusoe; Story of Thanksgiving; Poems for Autumn and Winter.

*Second Term.*—The Golden Touch; The Miraculous Pitcher; The Three Golden Apples; The Paradise of Children; Story of Washington, Lincoln, and Longfellow; Myths from Hiawatha; Poems from Longfellow.

*Third Term.*—The Pomegranate Seeds; The Golden Fleece; The Pygmies; Circe's Palace; Study of the Indian; Poems and Legends of Flowers.

## SCIENCE.

*First Term.*—Fall flowers, fruits, vegetables, seeds, grains, and the preparations for winter.

*Second Term.*—Wool, leather, furs, fur-bearing animals, cotton, silk, linen, straw, and rubber. Buds.

*Third Term.*—White Ash, Tulip Tree, Red Bird, Birch, Violet, Crocus, Narcissus, Lily of the Valley, Bobolink, and a review of the common birds.

## READING.

*First Term.*—Barnes's Third Reader. For Supplementary, Scudder's Folk Stories.

*Second Term.*—Complete Barnes's Third and begin Harper's Third. For supplementary, complete Folk Stories and begin Stickney's Third.

*Third Term.*—Complete Harper's Third, also Stickney's Third. Throughout the year the pupils read selections on the board taken from the Literature and Science.

## NUMBER.

A review of the second year's work. Cropsey's Elementary Arithmetic; combinations through 100; Roman Numerals to 100; concrete work with picturing of problems; multiplication tables; Addition, Subtraction, Multiplication, and Short Division. Cook and Cropsey's Elementary Arithmetic to Part II.

## GEOGRAPHY.

*First Term.*—Food Products and Clothing.

*Second Term.*—Position, direction, cardinal points, distance, scale; map of the school room, school yard, and vicinity.

*Third Term.*—Buildings and Materials; Home Government; Local Industries; Roads and Bridges; Town and Public Buildings; Local Commerce; Local Surface Features.

PUPIL TEACHER AND CLASS.